unitech
because we care

2D Imager Scanner

- MS832 -

User's Manual

Version 1.0

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

About This Manual

Disclaimer

Unitech reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult Unitech to determine whether any such changes have been made. The information in this publication does not represent a commitment on the part of Unitech.

Unitech shall not be liable for technical or editorial errors or omissions contained herein: nor for incidental or consequential damages resulting from the furnishing, performance, or use of this manual.

This document contains propriety information that is protected by copyright. All rights reserved. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of Unitech.

© 2013 Unitech. All rights reserved.

Trademarks

Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation. Other product names mentioned in this manual may be trademarks or registered trademarks of their respective companies and are the property of their respective owners.

Regulatory Compliance Statements

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure requirements, avoid direct contact to the transmitting antenna during transmitting.
3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC Label Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

RF Radiation Exposure Statement

For body contact during operation, this phone has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

European Conformity Statement

Declaration of Conformity with regards to the R&TTE 1999/5/EC and EMC 89/336/ EEC directives.

RoHS Statement

This device conforms to RoHS (Reduction Of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Taiwan NCC Warning Statement

交通部電信總局低功率電波輻射性電機管理辦法 (930322)

根據交通部低功率管理辦法規定：

第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條　低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

減少電磁波影響，請妥適使用

Warranty

The following item covered under the Unitech Limited Warranty are free from defects during normal use:

- MS832 – 1-year limited warranty.

Warranty becomes void if equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed or replaced by the user.

Use only the adapter supplied. Using the wrong adapter may damage the unit and will void the warranty.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Table of Contents

Chapter 1 1
Getting Started 1
About This Manual 1
Unpacking Your Device 1
Connecting the Device 1
Connecting with USB 1
Connecting with Keyboard Wedge 2
Reading Techniques 3
Menu Bar Code Security Settings 3
Setting Custom Defaults 4
Resetting the Custom Defaults 4
Resetting the Factory Defaults 5
Chapter 2 6
Programming the Interface 6
Introduction 6
Programming the Interface - Plug and Play 6
Keyboard Wedge 6
Laptop Direct Connect 6
USB IBM SurePos 7
USB PC or Macintosh Keyboard 7
USB HID 8
Keyboard Country Layout 9
Keyboard Style 15
Keyboard Conversion 17
Control Character Output 17
Keyboard Modifiers 18
Chapter 3 20
Input/Output Settings 20

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Power Up Beeper 20
Trigger Click 20
Good Read and Error Indicators 21
Beeper – Good Read 21
Beeper Volume – Good Read 21
Beeper Pitch – Good Read 22
Beeper Pitch – Error 22
Beeper Duration – Good Read 22
LED – Good Read 23
Number of Beeps – Good Read 23
Number of Beeps – Error 23
Good Read Delay 24
User-Specified Good Read Delay 24
Manual Trigger Mode 24
Presentation Mode 25
Presentation Sensitivity 25
Presentation Centering 25
Mobile Phone Read Mode 27
Hands Free Time-Out 28
Reread Delay 28
User-Specified Reread Delay 29
Scanner Time-Out 29
Centering 29
No Read 31
Video Reverse 32
Working Orientation 33
Chapter 4 34
Data Editing 34
Prefix/Suffix Overview 34
Points to Keep In Mind 34
To Add a Prefix or Suffix: 34
To Clear One or All Prefixes or Suffixes 35
To Add a Carriage Return Suffix to All Symbologies 36
Prefix Selections 36

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Suffix Selections 37
Function Code Transmit 37
Intercharacter, Interfunction, and Intermessage Delays 37
Intercharacter Delay 38
User Specified Intercharacter Delay 38
Interfunction Delay 39
Intermessage Delay 39
Chapter 5 40
Data Formatting 40
Data Format Editor Introduction 40
Add a Data Format 40
Other Programming Selections 42
Terminal ID Table 43
Data Format Editor Commands 43
Send Commands 43
Move Commands 44
Search Commands 44
Miscellaneous Commands 45
Data Formatter 46
Primary/Alternate Data Formats 47
Chapter 6 48
Symbologies 48
All Symbologies 49
Message Length Description 49
Codabar 50
Code 39 53
Interleaved 2 of 5 57
NEC 2 of 5 58
Code 93 60
Straight 2 of 5 Industrial (three-bar start/stop) 62
Straight 2 of 5 IATA (two-bar start/stop) 63
Matrix 2 of 5 64
Code 128 65
GS1-128 67

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

UPC-A 68
UPC-A/EAN-13 70
with Extended Coupon Code 70
Coupon GS1 DataBar Output 71
MSI 79
GS1 DataBar Omnidirectional 81
GS1 DataBar Limited 81
GS1 DataBar Expanded 82
Codablock A 83
Codablock F 84
PDF417 85
MacroPDF417 86
TCIF Linked Code 39 (TLC39) 89
QR Code 90
Data Matrix 92
Aztec Code 94
Chinese Sensible (Han Xin) Code 96
Postal Codes - Linear 96
Chapter 7 99
Interface Keys 99
Keyboard Function Relationships 99
Supported Interface Keys 101
Chapter 8 102
Utilities 102
To Add a Test Code I.D. Prefix to All Symbologies 102
Show Decoder Revision 102
Show Scan Driver Revision 102
Show Software Revision 102
Show Data Format 103
Test Menu 103
Chapter 9 104
Product Specifications 104
Unitech MS832 Scanner Product Specifications 104
Standard Cable Pinouts 105

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Keyboard Wedge 105
Standard Cable Pinouts 106
USB 106
Chapter 10 107
Maintenance 107
Repairs 107
Maintenance 107
Cleaning the Device 107
Inspecting Cords and Connectors 107
Replacing Cables 107
Replacing an Interface Cable 108
Troubleshooting a Unitech MS832 Scanner 108
Chapter 11 110
Customer Support 110
Technical Assistance 110
Limited Warranty 110
Chapter A 112
Reference Charts 112
Symbology Chart 112
ASCII Conversion Chart (Code Page 1252) 115
Code Page Mapping of Printed Bar Codes 117
Unicode Key Maps 119
Appendix 125
Worldwide Support 125

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 1

Getting Started

About This Manual

This User's Guide provides installation and programming instructions for the Unitech MS832 area-imaging scanner. Product specifications, dimensions, warranty, and customer support information are also included.

unitech bar code scanners are factory programmed for the most common terminal and communications settings. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide.

An asterisk (*) next to an option indicates the default setting.

Unpacking Your Device

After you open the shipping carton containing the product, take the following steps:

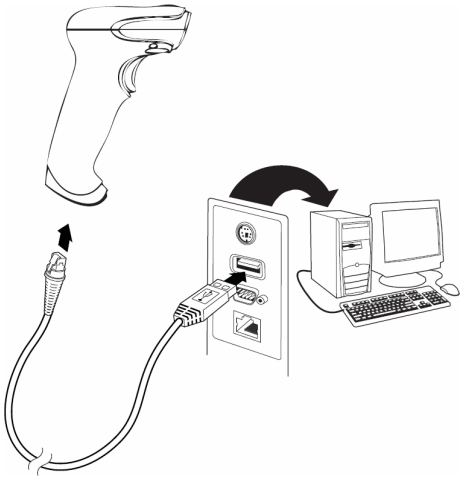
- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

Connecting the Device

Connecting with USB

A scanner can be connected to the USB port of a computer.

1. Connect the appropriate interface cable to the device first, then to the computer.



Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

2. The scanner beeps.
3. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual.

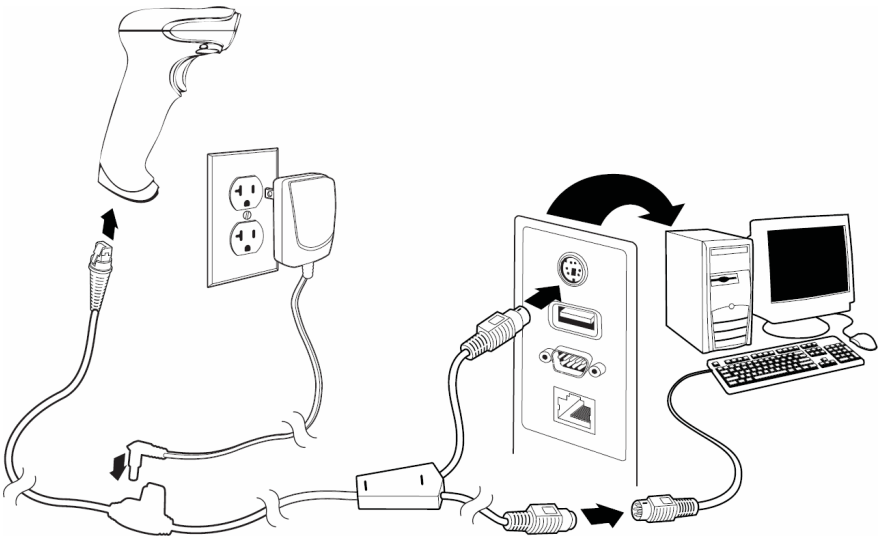
The unit defaults to a USB PC Keyboard. Refer to page 11 for other USB terminal settings.

Connecting with Keyboard Wedge

A scanner can be connected between the keyboard and PC as a “keyboard wedge,” where the scanner provides data output that is similar to keyboard entries. The following is an example of a keyboard wedge connection:

1. Turn off power and disconnect the keyboard cable from the back of the terminal/computer.

2. Connect the appropriate interface cable to the device and to the terminal/computer.



3. Turn the terminal/computer power back on. The scanner beeps.

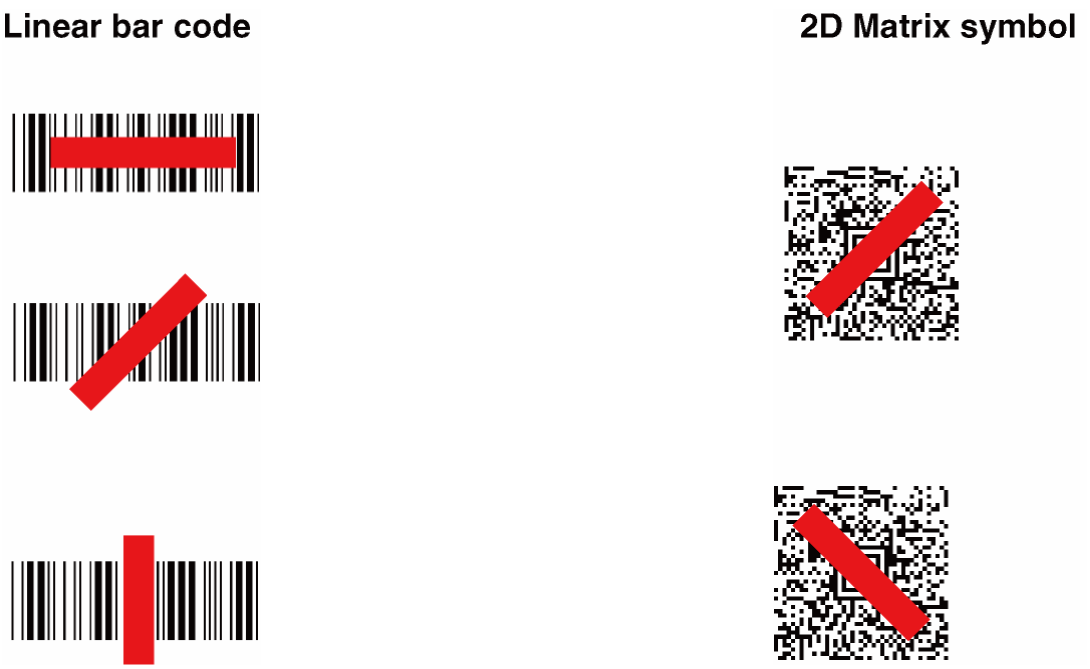
4. Verify the scanner operation by scanning a bar code from the Sample Symbols in the back of this manual. The scanner beeps once.

The unit defaults to an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard. A carriage return (CR) suffix is added to bar code data.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Reading Techniques

The scanner has a view finder that projects a bright red aiming beam that corresponds to the scanner's horizontal field of view. The aiming beam should be centered over the bar code, but it can be positioned in any direction for a good read.



The aiming beam or pattern is smaller when the scanner is closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. To read single or multiple symbols (on a page or on an object), hold the scanner at an appropriate distance from the target, press the button, and center the aiming beam or pattern on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code up 15° to 18° to prevent unwanted reflection.

Menu Bar Code Security Settings

unitech scanners are programmed by scanning menu bar codes or by sending serial commands to the scanner. If you want to restrict the ability to scan menu codes, you can use the Menu Bar Code Security settings. Please contact the nearest technical support office (see Customer Support on page 110) for further information.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Setting Custom Defaults

You have the ability to create a set of menu commands as your own, custom defaults. To do so, scan the **Set Custom Defaults** bar code below before scannning the menu commands for your custom defaults. If a menu command requires scanning numeric codes from the back cover, then a **Save** code, that entire sequence will be saved to your custom defaults. When you have entered all the commands you want to save for your custom defaults, scan the **Save Custom Defaults** bar code.

Set Custom Defaults

Save Custom Defaults

You may have a series of custom settings and want to correct a single setting. To do so, just scan the new setting to overwrite the old one. For example, if you had previously saved the setting for Beeper Volume at Low to your custom defaults, and decide you want the beeper volume set to High, just scan the **Set Custom Defaults** bar code, then scan the Beeper Volume High menu code, and then **Save Custom Defaults**. The rest of the custom defaults will remain, but the beeper volume setting will be updated.

Resetting the Custom Defaults

If you want the custom default settings restored to your scanner, scan the **Activate Custom Defaults** bar code below. This is the recommended default bar code for most users. It resets the scanner to the custom default settings. If there are no custom defaults, it will reset the scanner to the factory default settings. Any settings that have not been specified through the custom defaults will be defaulted to the factory default settings.

Activate Custom Defaults

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Resetting the Factory Defaults

This selection erases all your settings and resets the scanner to the original factory defaults. It also disables all plugins.

If you aren't sure what programming options are in your scanner, or you've changed some options and want to restore the scanner to factory default settings, first scan the **Remove Custom Defaults** bar code, then scan **Activate Defaults**. This resets the scanner to the factory default settings.

DEFOVR.

Remove Custom Defaults

DEFALT.

Activate Custom Defaults

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 2

Programming the Interface

Introduction

This chapter describes how to program your system for the desired interface.

Programming the Interface - Plug and Play

Plug and Play bar codes provide instant scanner set up for commonly used interfaces.

Note: After you scan one of the codes, power cycle the host terminal to have the interface in effect.

Keyboard Wedge

If you want your system programmed for an IBM PC AT and compatibles keyboard wedge interface with a USA keyboard, scan the bar code below. Keyboard wedge is the default interface.

Note: The following bar code also programs a carriage return (CR) suffix.

PAP_AT.

IBM PC AT and Compatibles with CR suffix

Laptop Direct Connect

For most laptops, scanning the **Laptop Direct Connect** bar code allows operation of the scanner in parallel with the integral keyboard. The following **Laptop Direct Connect** bar code also programs a carriage return (CR) suffix and turns on Emulate External Keyboard (page 17).

PAPLTD.

Laptop Direct Connect with CR suffix

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

USB IBM SurePos

Scan one of the following “Plug and Play” codes to program the scanner for an IBM SurePos (USB handheld scanner) or IBM SurePos (USB tabletop scanner) interface.

Note: After scanning one of these codes, you must power cycle the cash register.

PAPSPH.

USB IBM SurePos (USB Handheld Scanner) Interface

PAPSPT.

USB IBM SurePos (USB Tabletop Scanner) Interface

Each bar code above also programs the following suffixes for each symbology:

Symbology	Suffix	Symbology	Suffix
EAN 8	0C	Code 39	00 0A 0B
EAN 13	16	Interleaved 2 of 5	00 0D 0B
UPC A	0D	Code 128	00 18 0B
UPC E	0A	Code 39	00 0A 0B

USB PC or Macintosh Keyboard

Scan one of the following codes to program the scanner for USB PC Keyboard or USB Macintosh Keyboard. Scanning these codes also adds a CR and LF.

PAP124.

USB Keyboard (PC)

PAP125.

USB Keyboard (Mac)

TERMID134.

USB Japanese Keyboard (PC)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

USB HID

Scan the following code to program the scanner for USB HID bar code scanners.

USB HID Bar Code Scanner

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Keyboard Country Layout

Scan the appropriate country code below to program the keyboard layout for your country or language. As a general rule, the following characters are supported, but need special care for countries other than the United States:
@ | $ # { } [ ] = / ‘ \ < > ~

KBDCTY0.
*** United States**

KBDCTY87.
United States (Dvorak)

KBDCTY88.
United States (Dvorak left)

KBDCTY89.
United Stated (Dvorak right)

KBDCTY30.
United States (International)

KBDCTY35.
Albania

KBDCTY81.
Azeri (Cyrillic)

KBDCTY80.
Azeri (Latin)

KBDCTY82.
Belarus

KBDCTY1.
Belgium

KBDCTY33.
Bosnia

KBDCTY16.
Brazil

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Keyboard Country (continued)

KBDCTY52.
Bulgaria (Cyrillic)

KBDCTY54.
Canada (French legacy)

KBDCTY55.
Canada (Multilingual)

KBDCTY15.
Czech

KBDCTY39.
Czech (QWERTY)

KBDCTY8.
Denmark

KBDCTY59.
Brazil (MS)

KBDCTY53.
Bulgaria (Latin)

KBDCTY18.
Canada (French)

KBDCTY32.
Croatia

KBDCTY40.
Czech (Programmers)

KBDCTY38.
Czech (QWERTZ)

KBDCTY11.
Dutch (Netherlands)

Keyboard Country (continued)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

KBDCTY41.
Estonia

KBDCTY83.
Faeroese

KBDCTY2.
Finland

KBDCTY3.
France

KBDCTY84.
Gaelic

KBDCTY4.
Germany

KBDCTY17.
Greek

KBDCTY64.
Greek (220 Latin)

KBDCTY61.
Greek (220)

KBDCTY65.
Greek (319 Latin)

KBDCTY62.
Greek (319)

KBDCTY63.
Greek (Latin)

KBDCTY66.
Greek (MS)

Keyboard Country (continued)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

KBDCTY12.
Hebrew

KBDCTY19.
Hungary

KBDCTY73.
Irish

KBDCTY5.
Italy

KBDCTY78.
Kazakh

KBDCTY14.
Latin America

KBDCTY60.
Greek (Polytonic)

KBDCTY50.
Hungarian (101 key)

KBDCTY75.
Iceland

KBDCTY56.
Italian (142)

KBDCTY28.
Japan ASCII

KBDCTY79.
Kyrgyz (Cyrillic)

KBDCTY42.
Latvia

Keyboard Country (continued)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

KBDCTY43.
Latvia (QWERTY)

KBDCTY44.
Lithuania

KBDCTY45.
Lithuania (IBM)

KBDCTY34.
Macedonia

KBDCTY74.
Malta

KBDCTY86.
Mongolian (Cyrillic)

KBDCTY9.
Norway

KBDCTY20.
Poland

KBDCTY57.
Polish (214)

KBDCTY58.
Polish (Programmers)

KBDCTY13.
Portugal

KBDCTY25.
Romania

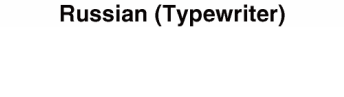
KBDCTY26.
Russia

Keyboard Country (continued)

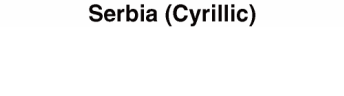
Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

KBDCTY67.
Russian (MS)

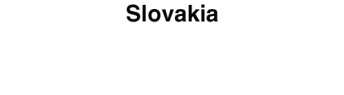
KBDCTY68.
Russian (Typewriter)


KBDCTY21.
SCS

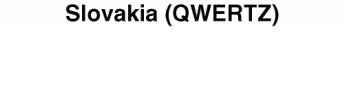
KBDCTY37.
Serbia (Cyrillic)


KBDCTY36.
Serbia (Latin)

KBDCTY22.
Slovakia


KBDCTY49.
Slovakia (QWERTY)

KBDCTY48.
Slovakia (QWERTZ)


KBDCTY31.
Slovenia

KBDCTY10.
Spain

KBDCTY51.
Spanish variation

KBDCTY23.
Sweden

KBDCTY29.
Switzerland (French)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Keyboard Country (continued)

KBDCTY85.
Tatar

KBDCTY24.
Turkey Q

KBDCTY7.
United Kingdom

KBDCTY88.
United States (Dvorak left)

KBDCTY30.
United States (International)

KBDCTY6.
Switzerland (German)

KBDCTY27.
Turkey F

KBDCTY76.
Ukrainian

KBDCTY89.
United Stated (Dvorak right)

KBDCTY87.
United States (Dvorak)

KBDCTY77.
Uzbek (Cyrillic)

Keyboard Style

This programs keyboard styles, such as Caps Lock and Shift Lock. If you have used Keyboard Conversion settings, they will override any of the following Keyboard Style settings. *Default* = *Regular*.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Regular is used when you normally have the Caps Lock key off.

KBDSTY0.
*** Regular**

Caps Lock is used when you normally have the Caps Lock key on.

KBDSTY1.
Caps Lock

Shift Lock is used when you normally have the Shift Lock key on (not common to U.S. keyboards).

KBDSTY2.
Shift Lock

Automatic Caps Lock is used if you change the Caps Lock key on and off.
The software tracks and reflects if you have Caps Lock on or off . This selection can only be used with systems that have an LED that notes the Caps Lock status (AT keyboards).

KBDSTY6.
Automatic Caps Lock

Autocaps via NumLock bar code should be scanned in countries (e.g., Germany, France) where the Caps Lock key cannot be used to toggle Caps Lock. The NumLock option works similarly to the regular Autocaps, but uses the NumLock key to retrieve the current state of the Caps Lock.

KBDSTY7.
Autocaps via NumLock

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Emulate External Keyboard should be scanned if you do not have an external keyboard (IBM AT or equivalent).

KBDSTY5.
Emulate External Keyboard

Note: After scanning the Emulate External Keyboard bar code, you must power cycle your computer.

Keyboard Conversion

Alphabetic keyboard characters can be forced to be all upper case or all lowercase. So if you have the following bar code: “abc569GK,” you can make the output “ABC569GK” by scanning **Convert All Characters to Upper Case**, or to “abc569gk” by scanning **Convert All Characters to Lower Case**.

These settings override Keyboard Style selections.

Note: If your interface is a keyboard wedge, first scan the menu code for Automatic Caps Lock (page 16). Otherwise, your output may not be as expected.

Default = Keyboard Conversion Off.

KBDCNV0.
*** Keyboard Conversion Off**

KBDCNV1.
Convert All Characters to Upper Case

KBDCNV2.
Convert All Characters to Lower Case

Control Character Output

This selection sends a text string instead of a control character. For example, when the control character for a carriage return is expected, the output would display [CR] instead of the ASCII code of 0D. Refer to ASCII Conversion Chart (Code Page 1252) on page 115. Only codes 00 through 1F are converted (the first column of the chart).

Note: Control + ASCII Mode overrides this mode.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Default = Off.

KBDNPE1.
Control Character Output On

KBDNPE0.
*** Control Character Output Off**

Keyboard Modifiers

This modifies special keyboard features, such as CTRL+ ASCII codes and Turbo Mode.

Control + ASCII Mode On: The scanner sends key combinations for ASCII control characters for values 00-1F. Windows is the preferred mode. All keyboard country codes are supported. DOS mode is a legacy mode, and it does not support all keyboard country codes. New users should use the Windows mode. Refer to Keyboard Function Relationships, page 98 for CTRL+ ASCII Values.

Windows Mode Prefix/Suffix Off: The scanner sends key combinations for ASCII control characters for values 00-1F, but it does not transmit any prefix or suffix information.

Default = Control + ASCII Mode Off.

KBDCAS2.
Windows Mode Control + ASCII Mode On

KBDCAS0.
*** Control + ASCII Mode Off**

KBDCAS1.
DOS Mode Control + ASCII Mode On

KBDCAS3.
Windows Mode Prefix/Suffix Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Turbo Mode: The scanner sends characters to a terminal faster. If the terminal drops characters, do not use Turbo Mode. *Default = Off*

KBDTMD1.
Turbo Mode On

KBDTMD0.
*** Turbo Mode Off**

Numeric Keypad Mode: Sends numeric characters as if entered from a numeric keypad. *Default = Off*

KBDNPS1.
Numeric Keypad Mode On

KBDNPS0.
*** Numeric Keypad Mode Off**

Automatic Direct Connect Mode: This selection can be used if you have an IBM AT style terminal and the system is dropping characters. *Default = Off*

KBDADC1.
Automatic Direct Connect Mode On

KBDADC0.
*** Automatic Direct Connect Mode Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 3

Input/Output Settings

Power Up Beeper

The scanner can be programmed to beep when it's powered up. Scan the **Off** bar code(s) if you don't want a power up beep. *Default = Power Up Beeper On - Scanner*.

Power Up Beeper Off - Scanner

*** Power Up Beeper On - Scanner**

Trigger Click

To hear an audible click every time the scanner button is pressed, scan the **Trigger Click On** bar code below. Scan the **Trigger Click Off** code if you don't wish to hear the click. (This feature has no effect on serial or automatic triggering.)
Default = Trigger Click Off.

***Trigger Click Off**

Trigger Click On

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Good Read and Error Indicators

Beeper – Good Read

The beeper may be programmed **On** or **Off** in response to a good read. Turning this option off, only turns off the beeper response to a good read indication. All error and menu beeps are still audible. *Default = Beeper - Good Read On*.

BEPBEP0.
Beeper - Good Read Off

BEPBEP1.
*** Beeper - Good Read On**

Beeper Volume – Good Read

The beeper volume codes modify the volume of the beep the scanner emits on a good read. *Default = High*.

BEPLVL1.
Low

BEPLVL2.
Medium

BEPLVL3.
*** High**

BEPLVL0.
Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Beeper Pitch – Good Read

The beeper pitch codes modify the pitch (frequency) of the beep the scanner emits on a good read. *Default = Medium*.

BEPFQ11600.
Low (1600 Hz)

BEPFQ12400.
*** Medium (2400 Hz)**

BEPFQ14200.
High (4200 Hz)

Beeper Pitch – Error

The beeper pitch codes modify the pitch (frequency) of the sound the scanner emits when there is a bad read or error. *Default = Razz*.

BEPFQ2250.
*** Razz (250 Hz)**

BEPFQ23250.
Medium (3250 Hz)

BEPFQ24200.
High (4200 Hz)

Beeper Duration – Good Read

The beeper duration codes modify the length of the beep the scanner emits on a good read. *Default = Normal*.

BEPBIP0.
*** Normal Beep**

BEPBIP1.
Short Beep

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

LED – Good Read

The LED indicator can be programmed **On** or **Off** in response to a good read. *Default = On*.

*** LED - Good Read On**

LED - Good Read Off

Number of Beeps – Good Read

The number of beeps of a good read can be programmed from 1 - 9. The same number of beeps will be applied to the beeper and LED in response to a good read. For example, if you program this option to have five beeps, there will be five beeps and five LED flashes in response to a good read. The beeps and LED flashes are in sync with one another. To change the number of beeps, scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the Programming Chart inside the back cover of this manual. *Default = 1*.

Number of Good Read Beeps/LED Flashes

Number of Beeps – Error

The number of beeps and LED flashes emitted by the scanner for a bad read or error can be programmed from 1 - 9. For example, if you program this option to have five error beeps, there will be five error beeps and five LED flashes in response to an error. To change the number of error beeps, scan the bar code below and then scan a digit (1-9) bar code and the **Save** bar code on the Programming Chart inside the back cover of this manual.
Default = 1.

Number of Error Beeps/LED Flashes

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Good Read Delay

This sets the minimum amount of time before the scanner can read another bar code. *Default = 0 ms (No Delay)*.

DLYGRD0.

*** No Delay**

DLYGRD500.

Short Delay (500 ms)

DLYGRD1000.

Medium Delay (1,000 ms)

DLYGRD1500.

Long Delay (1,500 ms)

User-Specified Good Read Delay

If you want to set your own length for the good read delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**.

DLYGRD.

User-Specified Good Read Delay

Manual Trigger Mode

When in manual trigger mode, the scanner scans until a bar code is read, or until the button is released. *Default = Manual Trigger-Normal*.

PAPHHF.

*** Manual Trigger - Normal**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Presentation Mode

Presentation Mode uses ambient light to detect bar codes. The LED dims until a bar code is presented to the scanner, then the LED brightens to read the code. If the light level in the room is not high enough, Presentation Mode may not work properly.

Presentation Sensitivity

Presentation Sensitivity is a numeric range that increases or decreases the scanner's reaction time to bar code presentation. To set the sensitivity, scan the **Sensitivity** bar code, then scan the degree of sensitivity (from 0-20) from the inside back cover, and **Save**. 0 is the most sensitive setting, and 20 is the least sensitive. *Default = 1*.

Presentation Centering

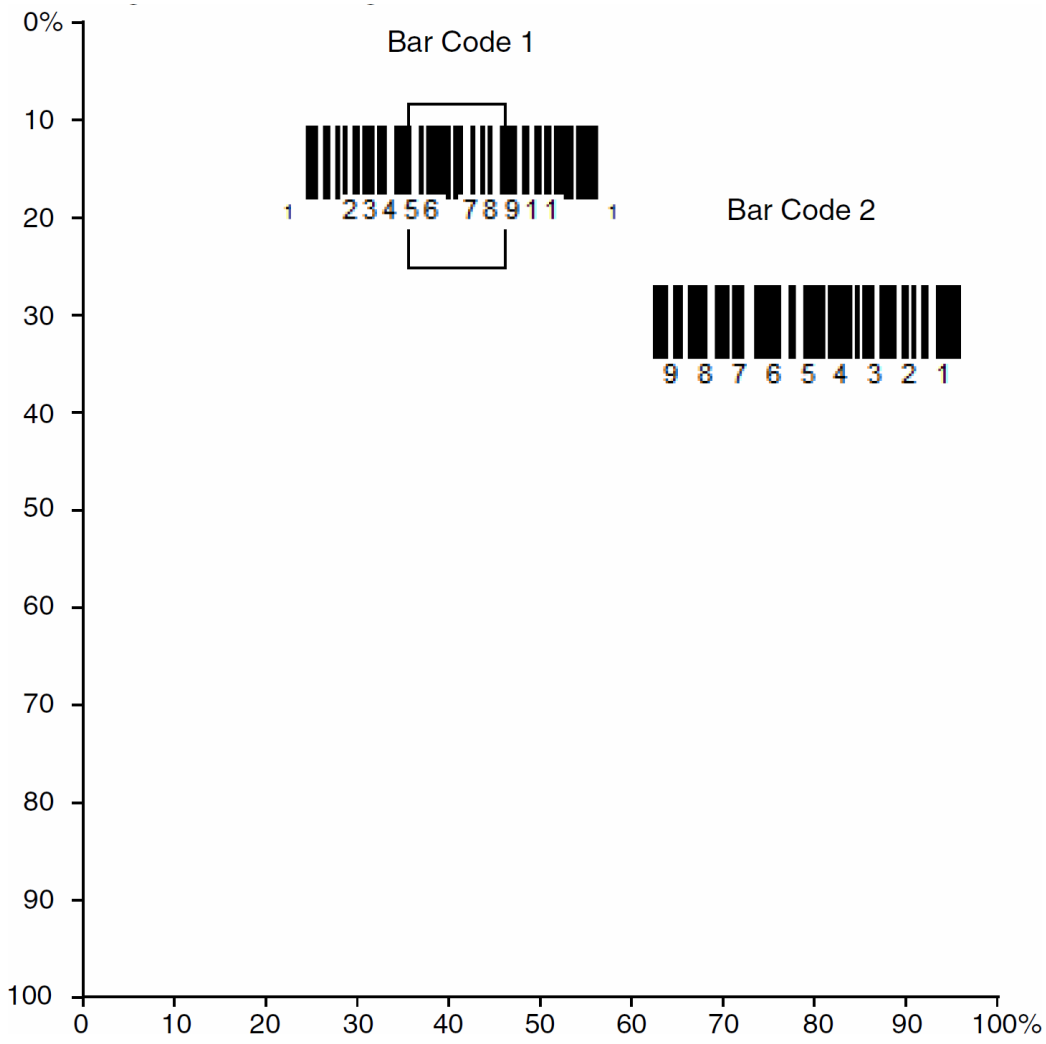
Use Presentation Centering to narrow the scanner’s field of view when it is in the stand to make sure the scanner reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, Presentation Centering will insure that only the desired codes are read.

Note: To adjust centering when the scanner is hand-held, see Centering (page 29).

If a bar code is not touched by a predefined window, it will not be decoded or output by the scanner. If Presentation Centering is turned on by scanning **Presentation Centering On**, the scanner only reads codes that pass through the centering window you specify using the **Top of Presentation Centering Window, Bottom of Presentation Centering Window, Left**, and **Right of Presentation Centering Window** bar codes.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom.
Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Scan **Presentation Centering On**, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan **Save**. *Default Presentation Centering = 40% for Top and Left, 60% for Bottom and Right*.

PDCWIN1.
Presentation Centering On

PDCWIN0.
*** Presentation Centering Off**

PDCTOP.
Top of Presentation Centering Window

PDCBOT.
Bottom of Presentation Centering Window

PDCLFT.
Left of Presentation Centering Window

PDCRGT.
Right of Presentation Centering

Mobile Phone Read Mode

When this mode is selected, your scanner is optimized to read bar codes from mobile phone or other LED displays. However, the speed of scanning printed bar codes may be slightly lower when this mode is enabled.

PAPHHC.
Hand Held Scanning - Mobile Phone

PAPPSC.
Presentation Scanning - Mobile Phone

Note: To turn off Mobil Phone Read Mode, scan the Manual Trigger Mode bar code (see page 24).

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Hands Free Time-Out

The Scan Stand and Presentation Modes are referred to as “hands free” modes. If the scanner’s button is pressed when using a hands free mode, the scanner changes to manual trigger mode. You can set the time the scanner should remain in manual trigger mode by setting the Hands Free Time-Out.
Once the time-out value is reached, (if there have been no further button presses) the scanner reverts to the original hands free mode.

Scan the **Hands Free Time-Out** bar code, then scan the time-out duration (from 0-300,000 milliseconds) from the inside back cover, and **Save**. *Default = 5,000 ms*.

Hands Free Time-Out

Reread Delay

This sets the time period before the scanner can read the same bar code a second time. Setting a reread delay protects against accidental rereads of the same bar code. Longer delays are effective in minimizing accidental rereads.
Use shorter delays in applications where repetitive bar code scanning is required. Reread Delay only works when in Presentation Mode (see page 25). *Default = Medium*.

Short Delay (500 ms)

*** Medium (750 ms)**

Medium Delay (1,000 ms)

Extra Long (2000 ms)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

User-Specified Reread Delay

If you want to set your own length for the reread delay, scan the bar code below, then set the delay (from 0-30,000 milliseconds) by scanning digits from the inside back cover, then scanning **Save**.

User-Specified Reread Delay

Scanner Time-Out

Scanner Time-Out powers down the scanner after the unit has been idle for the specified time. To prevent the scanner from powering down, set this time-out to 0, or no timer. Scan **Scanner Time-Out**, then set the time-out by scanning digits (from 0 - 999,999 ms) from the inside back cover, then scanning **Save**.
Default = 1 ms.

Scanner Time-Out

Centering

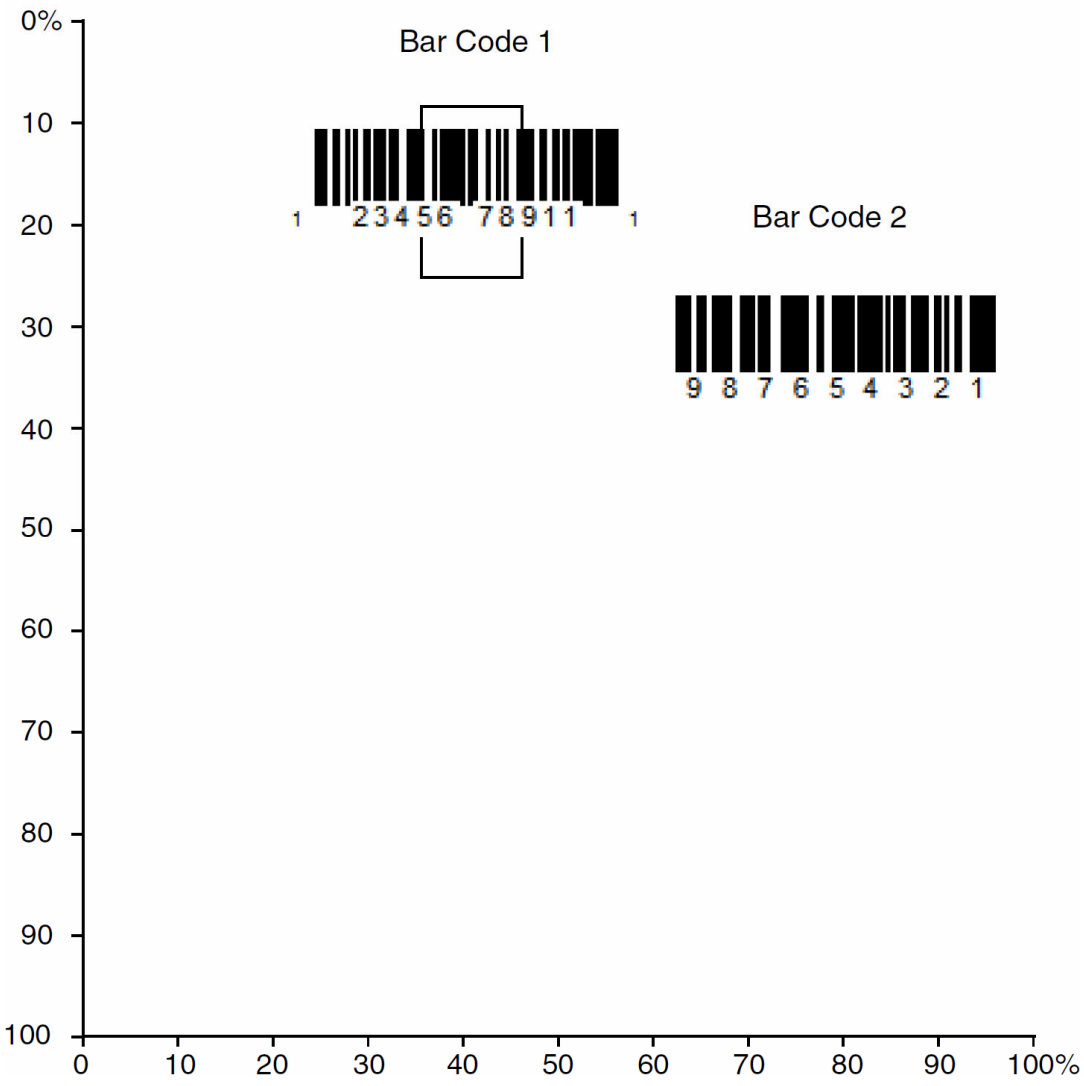
Use Centering to narrow the scanner's field of view to make sure that when the scanner is hand-held, it reads only those bar codes intended by the user. For instance, if multiple codes are placed closely together, centering will insure that only the desired codes are read.

Note: To adjust centering when the scanner is in the stand, see Presentation Centering (page 25).

If a bar code is not touched by a predefined window, it will not be decoded or output by the scanner. If centering is turned on by scanning **Centering On**, the scanner only reads codes that pass through the centering window you specify using the **Top of Centering Window, Bottom of Centering Window, Left**, and **Right of Centering Window** bar codes.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

In the example below, the white box is the centering window. The centering window has been set to 20% left, 30% right, 8% top, and 25% bottom. Since Bar Code 1 passes through the centering window, it will be read. Bar Code 2 does not pass through the centering window, so it will not be read.



Note: A bar code needs only to be touched by the centering window in order to be read. It does not need to pass completely through the centering window.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Scan **Centering On**, then scan one of the following bar codes to change the top, bottom, left, or right of the centering window. Then scan the percent you want to shift the centering window using digits on the inside back cover of this manual. Scan **Save**. *Default Centering = 40% for Top and Left, 60% for Bottom and Right*.

DECWIN1.
Centering On

DECWIN0.
*** Centering Off**

DECTOP.
Top of Centering Window

DECBOT.
Bottom of Centering Window

DECLFT.
Left of Centering Window

DECRGT.
Right of Centering Window

No Read

With No Read turned **On**, the scanner notifies you if a code cannot be read.
Default = Off.

SHWNRD1.
On

SHWNRD0.
*** Off**

If you want a different notation than “NR,” for example, “Error,” or “Bad Code,” you can edit the output message (see Data Formatting beginning on page 40).
The hex code for the No Read symbol is 9C.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Video Reverse

Video Reverse is used to allow the scanner to read bar codes that are inverted.
The **Video Reverse Off** bar code below is an example of this type of bar code.
Scan **Video Reverse Only** to read only inverted bar codes. Scan **Video Reverse and Standard Bar Codes** to read both types of codes.

*Note: After scanning **Video Reverse Only**, menu bar codes cannot be read.*
*You must scan **Video Reverse Off** or **Video Reverse and Standard Bar Codes** in order to read menu bar codes.*

Note: Images downloaded from the unit are not reversed. This is a setting for decoding only.

Video Reverse Only

Video Reverse and Standard Bar Codes

*** Video Reverse Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

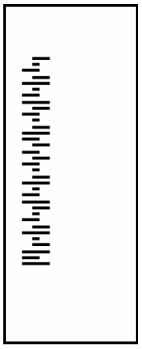
Working Orientation

Some bar codes are direction-sensitive. For example, KIX codes and OCR can misread when scanned sideways or upside down. Use the working orientation settings if your direction-sensitive codes will not usually be presented upright to the scanner. *Default = Upright*.

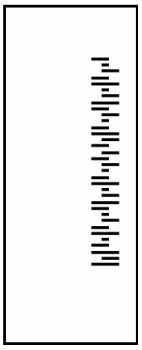
Upright:

Upside Down:

Vertical, Top to Bottom:
(Rotate CW 90°)



Vertical, Bottom to Top:
(Rotate CCW 90°)



Default = Upright.

ROTATN0.
*** Upright**

ROTATN1.
Vertical, Bottom to Top

ROTATN2.
Upside Down

ROTATN3.
Vertical, Top to Bottom

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

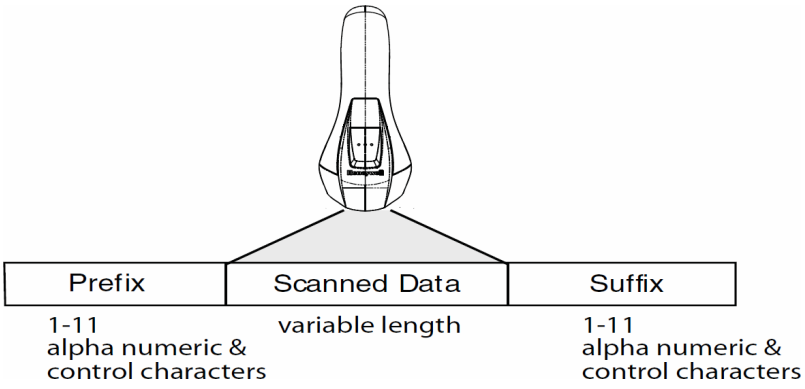
Chapter 4

Data Editing

Prefix/Suffix Overview

When a bar code is scanned, additional information is sent to the host computer along with the bar code data. This group of bar code data and additional, user-defined data is called a "message string." The selections in this section are used to build the user-defined data into the message string.

Prefix and Suffix characters are data characters that can be sent before and after scanned data. You can specify if they should be sent with all symbologies, or only with specific symbologies. The following illustration shows the breakdown of a message string:



Points to Keep In Mind

- It is not necessary to build a message string. The selections in this chapter are only used if you wish to alter the default settings. *Default prefix = None. Default suffix = None*.
- A prefix or suffix may be added or cleared from one symbology or all symbologies.
- You can add any prefix or suffix from the ASCII Conversion Chart (Code Page 1252), beginning on page 115, plus Code I.D. and AIM I.D.
- You can string together several entries for several symbologies at one time.
- Enter prefixes and suffixes in the order in which you want them to appear on the output.
- When setting up for specific symbologies (as opposed to all symbologies), the specific symbology ID value counts as an added prefix or suffix character.
- The maximum size of a prefix or suffix configuration is 200 characters, which includes header information.

To Add a Prefix or Suffix:

Step 1. Scan the **Add Prefix** or **Add Suffix** symbol (page 36).
Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in the Symbology

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chart, beginning on page 112) for the symbology to which you want to apply the prefix or suffix. For example, for Code 128, Code ID is “j” and Hex ID is “6A”.

Step 3. Scan the 2 hex digits from the Programming Chart inside the back cover of this manual or scan **9**, **9** for all symbologies.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252), beginning on page 115, for the prefix or suffix you wish to enter.

Step 5. Scan the 2 digit hex value from the Programming Chart inside the back cover of this manual.

Step 6. Repeat Steps 4 and 5 for every prefix or suffix character.

Step 7. To add the Code I.D., scan **5**, **C**, **8**, **0**.
To add AIM I.D., scan **5**, **C**, **8**, **1**.
To add a backslash (\), scan **5**, **C**, **5**, **C**.

Note: To add a backslash (\) as in Step 7, you must scan 5C twice – once to create the leading backslash and then to create the backslash itself.

Step 8. Scan **Save** to exit and save, or scan **Discard** to exit without saving.
Repeat Steps 1-6 to add a prefix or suffix for another symbology.

Example: Add a Suffix to a specific symbology

To send a CR (carriage return)Suffix for U.P.C. only:

Step 1. Scan **Add Suffix**.

Step 2. Determine the 2 digit hex value from the Symbology Chart (included in the Symbology Chart, beginning on page 112) for U.P.C..

Step 3. Scan **6**, **3** from the Programming Chart inside the back cover of this manual.

Step 4. Determine the hex value from the ASCII Conversion Chart (Code Page 1252), beginning on page 115, for the CR (carriage return).

Step 5. Scan **0**, **D** from the Programming Chart inside the back cover of this manual.

Step 6. Scan **Save**, or scan **Discard** to exit without saving.

To Clear One or All Prefixes or Suffixes

You can clear a single prefix or suffix, or clear all prefixes/suffixes for a symbology. If you have been entering prefixes and suffixes for single symbologies, you can use **Clear One Prefix (Suffix)** to delete a specific character from a symbology. When you **Clear All Prefixes (Suffixes)**, all the prefixes or suffixes for a symbology are deleted.

Step 1. Scan the **Clear One Prefix** or **Clear One Suffix** symbol.

Step 2. Determine the 2 digit Hex value from the Symbology Chart (included in the Symbology Chart, beginning on page 112) for the symbology from which you want to clear the prefix or suffix.

Step 3. Scan the 2 digit hex value from the Programming Chart inside the back cover of this manual or scan **9**, **9** for all symbologies.

Your change is automatically saved.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

To Add a Carriage Return Suffix to All Symbologies

Scan the following bar code if you wish to add a carriage return suffix to all symbologies at once. This action first clears all current suffixes, then programs a carriage return suffix for all symbologies.

Add CR Suffix All Symbologies

Prefix Selections

Add Prefix

Clear One Prefix

Clear All Prefixes

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Suffix Selections

SUFBK2.
Add Suffix

SUFCL2.
Clear One Suffix

SUFCA2.
Clear All Suffixes

Function Code Transmit

When this selection is enabled and function codes are contained within the scanned data, the scanner transmits the function code to the terminal. Charts of these function codes are provided in Supported Interface Keys starting on page 101. When the scanner is in keyboard wedge mode, the scan code is converted to a key code before it is transmitted. *Default* = *Enable*.

RMVFNC0.
*** Enable**

RMVFNC1.
Disable

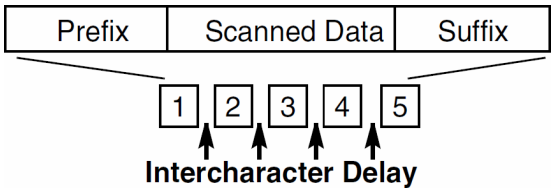
Intercharacter, Interfunction, and Intermessage Delays

Some terminals drop information (characters) if data comes through too quickly. Intercharacter, interfunction, and intermessage delays slow the transmission of data, increasing data integrity.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Intercharacter Delay

An intercharacter delay of up to 5000 milliseconds (in 5ms increments) may be placed between the transmission of each character of scanned data. Scan the Intercharacter Delay bar code below, then scan the number of 5ms delays, and the **Save** bar code using the **Programming** Chart inside the back cover of this manual.



DLYCHR.
Intercharacter Delay

To remove this delay, scan the **Intercharacter Delay** bar code, then set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Note: Intercharacter delays are not supported in USB serial emulation.

User Specified Intercharacter Delay

An intercharacter delay of up to 5000 milliseconds (in 5ms increments) may be placed after the transmission of a particular character of scanned data. Scan the **Delay Length** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.

Next, scan the **Character to Trigger Delay** bar code, then the 2-digit hex value for the ASCII character that will trigger the delay ASCII Conversion Chart (Code Page 1252), beginning on page 115.

DLYCRX.
Delay Length

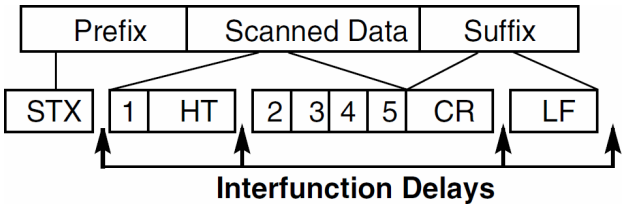
DLY_XX.
Character to Trigger Delay

To remove this delay, scan the **Delay Length** bar code, and set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Interfunction Delay

An interfunction delay of up to 5000 milliseconds (in 5ms increments) may be placed between the transmission of each segment of the message string. Scan the **Interfunction Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.

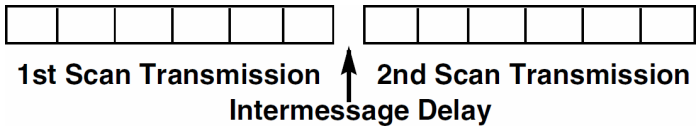


DLYFNC.
Interfunction Delay

To remove this delay, scan the **Interfunction Delay** bar code, then set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Intermessage Delay

An intermessage delay of up to 5000 milliseconds (in 5ms increments) may be placed between each scan transmission. Scan the **Intermessage Delay** bar code below, then scan the number of 5ms delays, and the **Save** bar code using the Programming Chart inside the back cover of this manual.



DLYMSG.
Intermessage Delay

To remove this delay, scan the **Intermessage Delay** bar code, then set the number of delays to 0. Scan the **Save** bar code using the Programming Chart inside the back cover of this manual.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 5

Data Formatting

Data Format Editor Introduction

You may use the Data Format Editor to change the scanner's output. For example, you can use the Data Format Editor to insert characters at certain points in bar code data as it is scanned. The selections in the following pages are used only if you wish to alter the output. *Default Data Format setting = None*.

Normally, when you scan a bar code, it gets outputted automatically; however when you create a format, you must use a "send" command (see Send Commands on page 43) within the format program to output data.

Multiple formats may be programmed into the scanner. They are stacked in the order in which they are entered. However, the following list presents the order in which formats are applied:

1. Specific Terminal ID, Actual Code ID, Actual Length
2. Specific Terminal ID, Actual Code ID, Universal Length
3. Specific Terminal ID, Universal Code ID, Actual Length
4. Specific Terminal ID, Universal Code ID, Universal Length
5. Universal Terminal ID, Actual Code ID, Actual Length
6. Universal Terminal ID, Actual Code ID, Universal Length
7. Universal Terminal ID, Universal Code ID, Actual Length
8. Universal Terminal ID, Universal Code ID, Universal Length

The maximum size of a data format configuration is 2000 bytes, which includes header information.

If you have changed data format settings, and wish to clear all formats and return to the factory defaults, scan the **Default Data Format** code below.

*** Default Data Format**

Add a Data Format

Step 1. Scan the **Enter Data Format** symbol (page 41).

Step 2. Select **Primary/Alternate Format**

Determine if this will be your primary data format, or one of 3 alternate formats. This allows you to save a total of 4 different data formats. To program your primary format,

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

scan **0** using the Programming Chart inside the back cover of this manual. If you are programming an alternate format, scan **1**, **2**, or **3**, depending on which alternate format you are programming. (See Primary/Alternate Data Formats on page 5-8 for further information.)

Step 3. Terminal Type

Refer to Terminal ID Table (page 43) and locate the Terminal ID number for your PC. Scan three numeric bar codes on the inside back cover to program the scanner for your terminal ID (you must enter 3 digits). For example, scan **0 0 3** for an AT wedge.

Note: The wildcard for all terminal types is 099.

Step 4. Code I.D.

In the Symbology Chart, beginning on page 112, find the symbology to which you want to apply the data format. Locate the Hex value for that symbology and scan the 2 digit hex value from the Programming Chart inside the back cover of this manual.

Note: If you are creating a data format for Batch Mode Quantity, use 35 for the Code I.D.

Step 5. Length

Specify what length (up to 9999 characters) of data will be acceptable for this symbology. Scan the four digit data length from the Programming Chart inside the back cover of this manual. (Note: 50 characters is entered as 0050. 9999 is a universal number, indicating all lengths.)

Step 6. Editor Commands

Refer to Data Format Editor Commands (page 43). Scan the symbols that represent the command you want to enter. 94 alphanumeric characters may be entered for each symbology data format.

Step 7. Scan **Save** to save your data format, or **Discard** to exit without saving your changes.

Enter Data Format

Save

Discard

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Other Programming Selections

Clear One Data Format

This deletes one data format for one symbology. If you are clearing the primary format, scan **0** from the Programming Chart inside the back cover of this manual. If you are clearing an alternate format, scan **1**, **2**, or **3**, depending on the format you are clearing. Scan the Terminal Type and Code I.D. (see Symbology Chart on page 112), and the bar code data length for the specific data format that you want to delete. All other formats remain unaffected.

Clear all Data Formats

This clears all data formats.

Save to exit and save your data format changes.

Discard to exit without saving any data format changes.

DFMCL3.
Clear One Data Format

DFMCA3.
Clear All Data Formats

MNUSAV.
Save

MNUABT.
Discard

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Terminal ID Table

Terminal	Model(s)	Terminal ID
IBM	PC/AT and compatibles	003
	USB SurePOS Handheld Scanner	128
	USB SurePOS Tabletop Scanner	129
USB	PC Keyboard	124
	Mac Keyboard	125
	Japanese Keyboard (PC)	134
	HID POS	131

Data Format Editor Commands

Send Commands

Send all characters

F1 Include in the output message all of the characters from the input message, starting from current cursor position, followed by an insert character. *Syntax = F1xx* where xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Send a number of characters

F2 Include in the output message a number of characters followed by an insert character. Start from the current cursor position and continue for "nn" characters or through the last character in the input message, followed by character "xx." *Syntax = F2nnxx* where nn stands for the numeric value (00-99) for the number of characters, and xx stands for the the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Send all characters up to a particular character

F3 Include in the output message all characters from the input message, starting with the character at the current cursor position and continuing to, but not including, the search character "ss," followed by an insert character. The cursor is moved forward to the "ss" character. *Syntax = F3ssxx* where ss stands for the search character's hex value for its ASCII code, and xx stands for the insert character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Send all but the last characters

E9 Include in the output message all but the last “nn” characters, starting from the current cursor position. The cursor is moved forward to one position past the last input message character included. *Syntax* = *E9nn* where nn stands for the numeric value (00-99) for the number of characters that will not be sent at the end of the message.

Insert a character multiple times

F4 Send “xx” character “nn” times in the output message, leaving the cursor in the current position. *Syntax* = *F4xxnn* where xx stands for the insert character’s hex value for its ASCII code, and nn is the numeric value (00-99) for the number of times it should be sent.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Move Commands

Move the cursor forward a number of characters

F5 Move the cursor ahead “nn” characters from current cursor position. *Syntax* = *F5nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved ahead.

Move the cursor backward a number of characters

F6 Move the cursor back “nn” characters from current cursor position. *Syntax* = *F6nn* where nn is the numeric value (00-99) for the number of characters the cursor should be moved back.

Move the cursor to the beginning

F7 Move the cursor to the first character in the input message. *Syntax* = *F7*.

Move the cursor to the end

EA Move the cursor to the last character in the input message. *Syntax* = *EA*.

Search Commands

Search forward for a character

F8 Search the input message forward for “xx” character from the currentcursor position, leaving the cursor pointing to the “xx” character. *Syntax* = *F8xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Search backward for a character

F9 Search the input message backward for “xx” character from the current cursor position, leaving the cursor pointing to the “xx” character.
Syntax = *F9xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Search forward for a non-matching character

E6 Search the input message forward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non-“xx” character. *Syntax* = *E6xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Search backward for a non-matching character

E7 Search the input message backward for the first non-“xx” character from the current cursor position, leaving the cursor pointing to the non- “xx” character. *Syntax* = *E7xx* where xx stands for the search character’s hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Miscellaneous Commands

Suppress characters

FB Suppress all occurrences of up to 15 different characters, starting at the current cursor position, as the cursor is advanced by other commands.
When the FC command is encountered, the suppress function is terminated. The cursor is not moved by the FB command.
Syntax = FBnnxxyy . .zz where nn is a count of the number of suppressed characters in the list, and xxyy .. zz is the list of characters to be suppressed.

Stop suppressing characters

FC Disables suppress filter and clear all suppressed characters. *Syntax* = *FC*.

Replace characters

E4 Replaces up to 15 characters in the output message, without moving the cursor. Replacement continues until the E5 command is encountered. *Syntax* = *E4nnxx$_1$xx$_2$yy$_1$yy$_2$...zz$_1$zz$_2$* where nn is the total count of of the number of characters in the list (characters to be replaced plus replacement characters); xx$_1$ defines characters to be replaced and xx$_2$ defines replacement characters, continuing through zz$_1$ and zz$_2$.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Stop replacing characters

E5 Terminates character replacement. *Syntax = E5.*

Compare characters

FE Compare the character in the current cursor position to the character "xx." If characters are equal, move the cursor forward one position.
Syntax = FExx where xx stands for the comparison character's hex value for its ASCII code.
Refer to the ASCII Conversion Chart (Code Page 1252), beginning on page 115 for decimal, hex and character codes.

Check for a number

EC Check to make sure there is an ASCII number at the current cursor position. The format is aborted if the character is not numeric.

Check for non-numeric character

ED Check to make sure there is a non-numeric ASCII character at the current cursor position. The format is aborted if the character is numeric.

Insert a delay

EF Inserts a delay of up to 49,995 milliseconds (in multiples of 5), starting from the current cursor position. Syntax = EFnnnn where nnnn stands for the delay in 5ms increments, up to 9999. This command can only be used with keyboard emulation.

Data Formatter

When Data Formatter is turned Off, the bar code data is output to the host as read, including prefixes and suffixes.

Data Formatter Off

You may wish to require the data to conform to a data format you have created and saved. The following settings can be applied to your data format:

Data Formatter On, Not Required, Keep Prefix/Suffix

Scanned data is modified according to your data format, and prefixes and suffixes are transmitted.

Data Format Required, Keep Prefix/Suffix

Scanned data is modified according to your data format, and prefixes and suffixes are transmitted. Any data that does not match your data format requirements generates an error tone and the data in that bar code is not transmitted.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Default = Data Formatter On, Not Required, Keep Prefix/Suffix.

DFM_EN1.
*** Data Formatter On, Not Required, Keep Prefix/Suffix**

DFM_EN2.
Data Format Required, Keep Prefix/Suffix

Primary/Alternate Data Formats

You can save up to four data formats, and switch between these formats. Your primary data format is saved under **0**. Your other three formats are saved under **1**, **2**, and **3**. To set your device to use one of these formats, scan one of the bar codes below.

ALTFNM0.
Primary Data Format

ALTFNM1.
Data Format 1

ALTFNM2.
Data Format 2

ALTFNM3.
Data Format 3

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 6

Symbologies

This programming section contains the following menu selections.

- All Symbologies
- Aztec Code
- China Post (Hong Kong 2 of 5)
- Chinese Sensible (Han Xin) Code
- Codabar
- Codablock A
- Codablock F
- Code 128
- Code 39
- Code 93
- Data Matrix
- EAN/JAN-13
- EAN/JAN-8
- GS1 Composite Codes
- GS1 DataBar Expanded
- GS1 DataBar Limited
- GS1 DataBar Omnidirectional
- GS1 Emulation
- GS1-128
- Interleaved 2 of 5
- Korea Post
- Matrix 2 of 5
- MicroPDF417
- MSI
- NEC 2 of 5
- Postal Codes - Linear
- PDF417
- GS1 DataBar Omnidirectional
- QR Code
- Straight 2 of 5 IATA (two-bar start/stop)
- Straight 2 of 5 Industrial (three-bar start/stop)
- TCIF Linked Code 39 (TLC39)
- UPC-A
- UPC-A/EAN-13 with Extended Coupon Code
- UPC-E0
- UPC-E1

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

All Symbologies

If you want to decode all the symbologies allowable for your scanner, scan the ***All Symbologies On*** code. If on the other hand, you want to decode only a particular symbology, scan **All Symbologies Off** followed by the On symbol for that particular symbology.

All Symbologies On

All Symbologies Off

Note: When All Symbologies On is scanned, 2D Postal Codes are not enabled. 2D Postal Codes must be enabled separately.

Message Length Description

You are able to set the valid reading length of some of the bar code symbologies. If the data length of the scanned bar code doesn't match the valid reading length, the scanner will issue an error tone. You may wish to set the same value for minimum and maximum length to force the scanner to read fixed length bar code data. This helps reduce the chances of a misread.

EXAMPLE: Decode only those bar codes with a count of 9-20 characters.
Min. length = 09Max. length = 20
EXAMPLE: Decode only those bar codes with a count of 15 characters.
Min. length = 15Max. length = 15

For a value other than the minimum and maximum message length defaults, scan the bar codes included in the explanation of the symbology, then scan the digit value of the message length and **Save** bar codes on the Programming Chart inside the back cover of this manual. The minimum and maximum lengths and the defaults are included with the respective symbologies.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Codabar

<Default All Codabar Settings>

Codabar On/Off

Off

*** On**

Codabar Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code.
You may either transmit, or not transmit Start/Stop characters.
Default = Don't Transmit.

Transmit

*** Don't Transmit**

Codabar Check Character

Codabar check characters are created using different "modulos." You can program the scanner to read only Codabar bar codes with Modulo 16 check characters. *Default = No Check Character*.

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to ***Validate and Transmit***, the scanner will only read Codabar bar codes printed with a check character, and will transmit this character at the end of the scanned data.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

When Check Character is set to ***Validate, but Don't Transmit***, the unit will only read Codabar bar codes printed with a check character, but will not transmit the check character ***with*** the scanned data.

CBRCK20.
*** No Check Character**

CBRCK21.
Validate Modulo 16, but Don't Transmit

CBRCK22.
Validate Modulo 16 and Transmit

Codabar Concatenation

Codabar supports symbol concatenation. When you enable concatenation, the scanner looks for a Codabar symbol having a "D" start character, adjacent to a symbol having a "D" stop character. In this case the two messages are concatenated into one with the "D" characters omitted.

A 1 2 3 4 D D 5 6 7 8 A

Select Require to prevent the scanner from decoding a single "D" Codabar symbol without its companion. This sele ction has no effect on Codabar symbols without Stop/Start D characters.

CBRCCT1.
On

CBRCCT0.
*** Off**

CBRCCT2.
Require

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Codabar Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 2-60. Minimum Default = 4, Maximum Default = 60.

Minimum Message Length

Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Code 39

< Default All Code 39 Settings >

Code 39 On/Off

Code 39 Start/Stop Characters

Start/Stop characters identify the leading and trailing ends of the bar code. You may either transmit, or not transmit Start/Stop characters. *Default = Don't Transmit*.

Code 39 Check Character

No Check Character indicates that the scanner reads and transmits bar code data with or without a check character.

When Check Character is set to **Validate, but Don't Transmit**, the unit only reads Code 39 bar codes printed with a check character, but will not transmit the check character with the scanned data.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

When Check Character is set to **Validate and Transmit**, the scanner only reads Code 39 bar codes printed with a check character, and will transmit this character at the end of the scanned data. *Default = No Check Character*.

C39CK20.
*** No Check Character**

C39CK21.
Validate, but Don't Transmit

C39CK22.
Validate and Transmit

Code 39 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 0-48. Minimum Default = 0, Maximum Default = 48.

C39MIN.
Minimum Message Length

C39MAX.
Maximum Message Length

Code 39 Append

This function allows the scanner to append the data from several Code 39 bar codes together before transmitting them to the host computer. When the scanner encounters a Code 39 bar code with the append trigger character(s), it buffers Code 39 bar codes until it reads a Code 39 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). *Default = Off*.

C39APP1.
On

C39APP0.
*** Off**

Full ASCII

If Full ASCII Code 39 decoding is enabled, certain character pairs within the bar code symbol

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

will be interpreted as a single character. For example: $V will be decoded as the ASCII character SYN, and /C will be decoded as the ASCII character #. *Default = Off*.

NUL	%U	DLE	$P	SP	SPACE	0	0	@	%V	P	P	‘	%W	p	+P
SOH	$A	DC1	$Q	!	/A	1	1	A	A	Q	Q	a	+A	q	+Q
STX	$B	DC2	$R	“	/B	2	2	B	B	R	R	b	+B	r	+R
ETX	$C	DC3	$S	#	/C	3	3	C	C	S	S	c	+C	s	+S
EOT	$D	DC4	$T	$	/D	4	4	D	D	T	T	d	+D	t	+T
ENQ	$E	NAK	$U	%	/E	5	5	E	E	U	U	e	+E	u	+U
ACK	$F	SYN	$V	&	/F	6	6	F	F	V	V	f	+F	v	+V
BEL	$G	ETB	$W	‘	/G	7	7	G	G	W	W	g	+G	w	+W
BS	$H	CAN	$X	(	/H	8	8	H	H	X	X	h	+H	x	+X
HT	$I	EM	$Y	)	/I	9	9	I	I	Y	Y	i	+I	y	+Y
LF	$J	SUB	$Z	*	/J	:	/Z	J	J	Z	Z	j	+J	z	+Z
VT	$K	ESC	%A	+	/K	;	%F	K	K	[	%K	k	+K	{	%P
FF	$L	FS	%B	,	/L	<	%G	L	L	\	%L	l	+L	|	%Q
CR	$M	GS	%C	-	-	=	%H	M	M	]	%M	m	+M	}	%R
SO	$N	RS	%D	.	.	>	%I	N	N	^	%N	n	+N	~	%S
SI	$O	US	%E	/	/O	?	%J	O	O	_	%O	o	+O	DEL	%T

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Character pairs /M and /N decode as a minus sign and period respectively.
Character pairs /P through /Y decode as 0 through 9.

C39ASC1.
Full ASCII On

C39ASC0.
*** Full ASCII Off**

Code 39 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see **Code Page Mapping of Printed Bar Codes** on page 117), and scan the value and the Save bar code from the **Programming Chart** on the inside the back cover of this manual. The data characters should then appear properly.

C39DCP.
Code 39 Code Page

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Interleaved 2 of 5

< Default All Interleaved 2 of 5 Settings >

I25DFT.

Interleaved 2 of 5 On/Off

I25ENA1.

*** On**

I25ENA0.

Off

Check Digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads Interleaved 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data.

When Check Digit is set to **Validate and Transmit**, the scanner only reads Interleaved 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data. *Default = No Check Digit*.

I25CK20.

*** No Check Digit**

I25CK21.

Validate, but Don't Transmit

I25CK22.

Validate and Transmit

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Interleaved 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

I25MIN.
Minimum Message Length

I25MAX.
Maximum Message Length

NEC 2 of 5

< Default All NEC 2 of 5 Settings >

N25DFT.

NEC 2 of 5 On/Off

N25ENA1.
*** On**

N25ENA0.
Off

Check Digit

No Check Digit indicates that the scanner reads and transmits bar code data with or without a check digit.

When Check Digit is set to **Validate, but Don't Transmit**, the unit only reads NEC 2 of 5 bar codes printed with a check digit, but will not transmit the check digit with the scanned data.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

When Check Digit is set to **Validate and Transmit**, the scanner only reads NEC 2 of 5 bar codes printed with a check digit, and will transmit this digit at the end of the scanned data. *Default = No Check Digit*.

N25CK20.
*** No Check Digit**

N25CK21.
Validate, but Don't Transmit

N25CK22.
Validate and Transmit

NEC 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

N25MIN.
Minimum Message Length

N25MAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Code 93

< Default All Code 93 Settings >

C93DFT.

Code 93 On/Off

C93ENA1.
*** On**

C93ENA0.
Off

Code 93 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

C93MIN.
Minimum Message Length

C93MAX.
Maximum Message Length

Code 93 Append

This function allows the scanner to append the data from several Code 93 bar codes together before transmitting them to the host computer. When this function is enabled, the scanner stores those Code 93 bar codes that start with a space (excluding the start and stop symbols), and does not immediately transmit the data. The scanner stores the data in the order in which the bar codes are read, deleting the first space from each. The scanner transmits the appended data when it reads a Code 93 bar code that starts with a character other than a space. *Default = Off*.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

C93APP1.
On

C93APP0.
*** Off**

Code 93 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see Code Page Mapping of Printed Bar Codes on page 117), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

C93DCP.
Code 93 Code Page

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Straight 2 of 5 Industrial (three-bar start/stop)

<Default All Straight 2 of 5 Industrial Settings>

R25DFT.

Straight 2 of 5 Industrial On/Off

R25ENA1.
On

R25ENA0.
*** Off**

Straight 2 of 5 Industrial Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

R25MIN.
Minimum Message Length

R25MAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Straight 2 of 5 IATA (two-bar start/stop)

<Default All Straight 2 of 5 IATA Settings>

A25DFT.

Straight 2 of 5 IATA On/Off

A25ENA1.
On

A25ENA0.
*** Off**

Straight 2 of 5 IATA Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-48. Minimum Default = 4, Maximum Default = 48.

A25MIN.
Minimum Message Length

A25MAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Matrix 2 of 5

<Default All Matrix 2 of 5 Settings>

X25DFT.

Matrix 2 of 5 On/Off

X25ENA1.
On

X25ENA0.
*** Off**

Matrix 2 of 5 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 4, Maximum Default = 80.

X25MIN.
Minimum Message Length

X25MAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Code 128

<Default All Code 128 Settings>

128DFT.

Code 128 On/Off

128ENA1.
*** On**

128ENA0.
Off

ISBT 128 Concatenation

In 1994 the International Society of Blood Transfusion (ISBT) ratified a standard for communicating critical blood information in a uniform manner. The use of ISBT formats requires a paid license. The ISBT 128 Application Specification describes 1) the critical data elements for labeling blood products, 2) the current recommendation to use Code 128 due to its high degree of security and its space-efficient design, 3) a variation of Code 128 that supports concatenation of neighboring symbols, and 4) the standard layout for bar codes on a blood product label. Use the bar codes below to turn concatenation on or off. *Default =Off*.

ISBENA1.
On

ISBENA0.
*** Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Code 128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 0-80. Minimum Default = 0, Maximum Default = 80.

Minimum Message Length

Maximum Message Length

Code 128 Append

This function allows the scanner to append the data from several Code 128 bar codes together before transmitting them to the host computer. When the scanner encounters a Code 128 bar code with the append trigger character(s), it buffers Code 128 bar codes until it reads a Code 128 bar code that does not have the append trigger. The data is then transmitted in the order in which the bar codes were read (FIFO). *Default = Off*.

On

*** Off**

Code 128 Code Page

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see **Code Page Mapping of Printed Bar Codes** on page 117), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

Code 128 Code Page

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

GS1-128

<Default All GS1-128 Settings>

GS1-128 On/Off

*** On**

Off

GS1-128 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-80. Minimum Default = 1, Maximum
Default = 80.

Minimum Message Length

Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

UPC-A

<Default All UPC-A Settings>

UPADFT.

UPC-A On/Off

UPAENA1.
*** On**

UPAENA0.
Off

*Note: When **UPC-A Off** is scanned, UPC-A bar codes are transmitted as EAN-13.*

UPC-A Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On*.

UPACKX1.
*** On**

UPACKX0.
Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

UPC-A Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. *Default = On*.

UPANSX1.

*** On**

UPANSX0.

Off

UPC-A Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-A data.
Default = Off for both 2 Digit and 5 Digit Addenda.

UPAAD21.

2 Digit Addenda On

UPAAD20.

*** 2 Digit Addenda Off**

UPAAD51.

5 Digit Addenda On

UPAAD50.

*** 5 Digit Addenda Off**

UPC-A Addenda Required

When ***Required*** is scanned, the scanner will only read UPC-A bar codes that have addenda. You must then turn on a 2 or 5 digit addenda listed on page 69. *Default = Not Required*.

UPAARQ1.

Required

UPAARQ0.

*** Not Required**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

UPC-A Addenda Separator

When this feature is on, there is a space between the data from the bar code and the data from the addenda. When turned off, there is no space. *Default = On*.

UPAADS1.
*** On**

UPAADS0.
Off

UPC-A/EAN-13 with Extended Coupon Code

Use the following codes to enable or disable UPC-A **and** EAN-13 with Extended Coupon Code. When left on the default setting (**Off**), the scanner treats Coupon Codes and Extended Coupon Codes as single bar codes.

If you scan the **Allow Concatenation** code, when the scanner sees the coupon code and the extended coupon code in a single scan, it transmits both as separate symbologies. Otherwise, it transmits the first coupon code it reads.

If you scan the **Require Concatenation** code, the scanner must see and read the coupon code and extended coupon code in a single read to transmit the data. No data is output unless both codes are read.

Default = Off.

CPNENA0.
*** Off**

CPNENA1.
Allow Concatenation

CPNENA2.
Require Concatenation

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Coupon GS1 DataBar Output

If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. Scan the **GS1 Output On** code below to scan and output only the GS1 DataBar code data. *Default = GS1 Output Off*.

CPNGS10.

*** GS1 Output Off**

CPNGS11.

GS1 Output On

UPC-E0

<Default All UPC-E Settings>

UPEDFT.

UPC-E0 On/Off

Most U.P.C. bar codes lead with the 0 number system. To read these codes, use the **UPC-E0 On** selection. If you need to read codes that lead with the 1 number system, use UPC-E1 (page 74). Default = On.

UPEEN01.

*** UPC-E0 On**

UPEEN00.

UPC-E0 Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

UPC-E0 Expand

UPC-E Expand expands the UPC-E code to the 12 digit, UPC-A format. *Default = Off*.

On

*** Off**

UPC-E0 Addenda Required

When **Required** is scanned, the scanner will only read UPC-E bar codes that have addenda. *Default = Not Required*.

Required

*** Not Required**

UPC-E0 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. *Default = On*.

*** On**

Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

PC-E0 Check Digit

Check Digit specifies whether the check digit should be transmitted at the end of the scanned data or not. *Default = On*.

*** On**

Off

UPC-E0 Number System

The numeric system digit of a U.P.C. symbol is normally transmitted at the beginning of the scanned data, but the unit can be programmed so it will not transmit it. To prevent transmission, scan **Off**. *Default = On*.

*** On**

Off

UPC-E0 Addenda

This selection adds 2 or 5 digits to the end of all scanned UPC-E data.
Default = Off for both 2 Digit and 5 Digit Addenda.

2 Digit Addenda On

*** 2 Digit Addenda Off**

5 Digit Addenda On

*** 5 Digit Addenda Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

UPC-E1

Most U.P.C. bar codes lead with the 0 number system. For these codes, use UPC-E0 (page 71). If you need to read codes that lead with the 1 number system, use the **UPC-E1 On** selection. *Default = Off*.

UPEEN11.
UPC-E1 On

UPEEN10.
*** UPC-E1 Off**

EAN/JAN-13

<Default All EAN/JAN Settings>

E13DFT.

EAN/JAN-13 On/Off

E13ENA1.
*** On**

E13ENA0.
Off

*Note: If you want to convert UPC-A bar codes to EAN-13 format, scan the **UPCA Off** bar code on page 67.*

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

EAN/JAN-13 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default = On*.

E13CKX1.
*** On**

E13CKX0.
Off

EAN/JAN-13 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-13 data. *Default = Off for both 2 Digit and 5 Digit Addenda*.

E13AD21.
2 Digit Addenda On

E13AD20.
*** 2 Digit Addenda Off**

E13AD51.
5 Digit Addenda On

E13AD50.
*** 5 Digit Addenda Off**

EAN/JAN-13 Addenda Required

When **Required** is scanned, the scanner will only read EAN/JAN-13 bar codes that have addenda. *Default = Not Required*.

E13ARQ1.
Required

E13ARQ0.
*** Not Required**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

EAN/JAN-13 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. *Default = On*.

Note: If you want to enable or disable EAN13 with Extended Coupon Code, refer to *UPC-A/EAN-13 with Extended Coupon Code (page 69).*

ISBN Translate

When **On** is scanned, EAN-13 Bookland symbols are translated into their equivalent ISBN number format. *Default = Off*.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

EAN/JAN-8

<Default All EAN/JAN-8 Settings>

EAN/JAN-8 On/Off

*** On**

Off

EAN/JAN-8 Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data or not. *Default* = *On*.

*** On**

Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

EAN/JAN-8 Addenda

This selection adds 2 or 5 digits to the end of all scanned EAN/JAN-8 data. *Default = Off for both 2 Digit and 5 Digit Addenda*.

EA8AD21.
2 Digit Addenda On

EA8AD20.
*** 2 Digit Addenda Off**

EA8AD51.
5 Digit Addenda On

EA8AD50.
*** 5 Digit Addenda Off**

EAN/JAN-8 Addenda Required

When **Required** is scanned, the scanner will only read EAN/JAN-8 bar codes that have addenda. *Default = Not Required*.

EA8ARQ1.
Required

EA8ARQ0.
*** Not Required**

EAN/JAN-8 Addenda Separator

When this feature is **On**, there is a space between the data from the bar code and the data from the addenda. When turned **Off**, there is no space. *Default = On*.

EA8ADS1.
*** On**

EA8ADS0.
Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

MSI

<Default All MSI Settings>

MSI On/Off

On

*** Off**

MSI Check Character

Different types of check characters are used with MSI bar codes. You can program the scanner to read MSI bar codes with Type 10 check characters. *Default = Validate Type 10, but Don't Transmit*.

When Check Character is set to **Validate Type 10/11 and Transmit**, the scanner will only read MSI bar codes printed with the specified type check character(s), and will transmit the character(s) at the end of the scanned data.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

When Check Character is set to **Validate Type 10/11**, but Don't Transmit, the unit will only read MSI bar codes printed with the specified type check character(s), but will not transmit the check character(s) with the scanned data.

MSICHK0.

*** Validate Type 10, but Don't Transmit**

MSICHK1.

Validate Type 10 and Transmit

MSICHK2.

Validate 2 Type 10 Characters, but Don't Transmit

MSICHK3.

Validate 2 Type 10 Characters and Transmit

MSICHK4.

Validate Type 10 then Type 11 Character, but Don't Transmit

MSICHK5.

Validate Type 10 then Type 11 Character and Transmit

MSICHK6.

Disable MSI Check Characters

MSI Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 4-48. Minimum Default = 4, Maximum Default = 48.

MSIMIN.

Minimum Message Length

MSIMAX.

Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

GS1 DataBar Omnidirectional

< Default All GS1 DataBar Omnidirectional Settings >

RSSDFT.

GS1 DataBar Omnidirectional On/Off

RSSENA1.
*** On**

RSSENA0.
Off

GS1 DataBar Limited

< Default All GS1 DataBar Limited Settings >

RSLDFT.

GS1 DataBar Limited On/Off

RSLENA1.
*** On**

RSLENA0.
Off

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

GS1 DataBar Expanded

< Default All GS1 DataBar Expanded Settings >

RSEDFT.

GS1 DataBar Expanded On/Off

RSLENA1.
*** On**

RSLENA0.
Off

GS1 DataBar Expanded Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 4-74. Minimum Default = 4, Maximum Default = 74.

RSEMIN.
Minimum Message Length

RSEMAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Codablock A

<Default All Codablock A Settings>

Codablock A On/Off

On

*** Off**

Codablock A Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-600. Minimum Default = 1, Maximum Default = 600.

Minimum Message Length

Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Codablock F

<Default All Codablock F Settings>

CBFDFT.

Codablock F On/Off

CBFENA1.
On

CBFENA0.
*** Off**

Codablock F Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-2048. Minimum Default = 1, Maximum Default = 2048.

CBFMIN.
Minimum Message Length

CBFMAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

PDF417

< Default All PDF417 Settings >

PDF417 On/Off

*** On**

Off

PDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-2750. Minimum Default = 1, Maximum Default = 2750.

Minimum Message Length

Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

MacroPDF417

MacroPDF417 is an implementation of PDF417 capable of encoding very large amounts of data into multiple PDF417 bar codes. When this selection is enabled, these multiple bar codes are assembled into a single data string. *Default = On*.

PDFMAC1.
*** On**

PDFMAC0.
Off

MicroPDF417

< Default All MicroPDF417 Settings >

MPDDFT.

MicroPDF417 On/Off

MPDENA1.
On

MPDENA0.
*** Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

MicroPDF417 Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-366. Minimum Default = 1, Maximum Default = 366.

Minimum Message Length

Maximum Message Length

GS1 Composite Codes

Linear codes are combined with a unique 2D composite component to form a new class called GS1 Composite symbology. GS1 Composite symbologies allow for the co-existence of symbologies already in use. *Default = Off*.

On

*** Off**

UPC/EAN Version

Scan the ***UPC/EAN Version On*** bar code to decode GS1 Composite symbols that have a U.P.C. or an EAN linear component. (This does not affect GS1 Composite symbols with a GS1-128 or GS1 linear component.) *Default = UPC/EAN Version Off*.

UPC/EAN Version On

*** UPC/EAN Version Off**

Note: If you scan coupons that have both UPC and GS1 DataBar codes, you may wish to scan and output only the data from the GS1 DataBar code. See Coupon GS1 DataBar Output (page 71) for further information.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

GS1 Composite Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-2435. Minimum Default = 1, Maximum Default = 2435.

Minimum Message Length

Maximum Message Length

GS1 Emulation

The scanner can automatically format the output from any GS1 data carrier to emulate what would be encoded in an equivalent GS1-128 or GS1 DataBar symbol. GS1 data carriers include UPC-A and UPC-E, EAN-13 and EAN-8, ITF-14, GS1-128, and GS1-128 DataBar and GS1 Composites. (Any application that accepts GS1 data can be simplified since it only needs to recognize one data carrier type.)

If **GS1-128 Emulation** is scanned, all retail codes (U.P.C., UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1 (see Symbology Chart on page 112).

If **GS1 DataBar Emulation** is scanned, all retail codes (U.P.C., UPC-E, EAN8, EAN13) are expanded out to 16 digits. If the AIM ID is enabled, the value will be the GS1-DataBar AIM ID,]em (see Symbology Chart on page 112).

If **GS1 Code Expansion Off** is scanned, retail code expansion is disabled, and UPC-E expansion is controlled by the UPC-E0 Expand (page 72) setting. If the AIM ID is enabled, the value will be the GS1-128 AIM ID,]C1 (see Symbology Chart on page 112).

If **EAN8 to EAN13 Conversion** is scanned, all EAN8 bar codes are converted to EAN13 format.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Default = GS1 Emulation Off.

EANEMU1.
GS1-128 Emulation

EANEMU2.
GS1 DataBar Emulation

EANEMU3.
GS1 Code Expansion Off

EANEMU4.
EAN8 to EAN13 Conversion

EANEMU0.
*** GS1 Emulation Off**

TCIF Linked Code 39 (TLC39)

This code is a composite code since it has a Code 39 linear component and a MicroPDF417 stacked code component. All bar code readers are capable of reading the Code 39 linear component. The MicroPDF417 component can only be decoded if **TLC39 On** is selected. The linear component may be decoded as Code 39 even if TLC39 is off. *Default = Off*.

T39ENA1.
On

T39ENA0.
*** Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

QR Code

< Default All QR Code Settings >

QRCDFT.

QR Code On/Off

This selection applies to both QR Code and Micro QR Code.

QRCENA1.
*** On**

QRCENA0.
Off

QR Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-7089. Minimum Default = 1, Maximum Default = 7089.

QRCMIN.
Minimum Message Length

QRCMAX.
Maximum Message Length

QR Code Append

This function allows the scanner to append the data from several QR Code bar codes together before transmitting them to the host computer. When the scanner encounters an QR Code bar code with the append trigger character(s), it buffers the number of QR Code bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = On*.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

QRCAPP1.

*** On**

QRCAPP0.

Off

QR Code Page

QR Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see Code Page Mapping of Printed Bar Codes on page 117), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

QRCDCP.

QR Code Page

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Data Matrix

< Default All Data Matrix Settings >

Data Matrix On/Off

*** On**

Off

Data Matrix Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-3116. Minimum Default = 1, Maximum Default = 3116.

Minimum Message Length

Maximum Message Length

Data Matrix Append

This function allows the scanner to append the data from several Data Matrix bar codes together before transmitting them to the host computer. When the scanner encounters an Data Matrix bar code with the append trigger character(s), it buffers the number of Data Matrix bar codes deter Off mined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. Default = On.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

IDMAPP1.

*** On**

IDMAPP0.

Off

Data Matrix Code Page

Data Matrix Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see Code Page Mapping of Printed Bar Codes on page 117), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

IDMDCP.

Data Matrix Code Page

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Aztec Code

< Default All Aztec Code Settings >

Aztec Code On/Off

*** On**

Off

Aztec Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-3832. Minimum Default = 1, Maximum Default = 3832.

Minimum Message Length

Maximum Message Length

Aztec Append

This function allows the scanner to append the data from several Aztec bar codes together before transmitting them to the host computer. When the scanner encounters an Aztec bar code with the append trigger character(s), it buffers the number of Aztec bar codes determined by information encoded in those bar codes. Once the proper number of codes is reached, the data is output in the order specified in the bar codes. *Default = Off*.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

AZTAPP1.
On

AZTAPP0.
*** Off**

Aztec Code Page

Aztec Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, scan the bar code below, select the code page with which the bar codes were created (see Code Page Mapping of Printed Bar Codes on page 117), and scan the value and the **Save** bar code from the Programming Chart on the inside the back cover of this manual. The data characters should then appear properly.

AZTDCP.
Aztec Code Page

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chinese Sensible (Han Xin) Code

< Default All Han Xin Settings >

Han Xin Code On/Off

On

*** Off**

Han Xin Code Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 1-7833. Minimum Default = 1, Maximum Default = 7833.

Minimum Message Length

Maximum Message Length

Postal Codes - Linear

The following lists linear postal codes. Any combination of linear postal code selections can be active at a time.

China Post (Hong Kong 2 of 5)

<Default All China Post (Hong Kong 2 of 5) Settings>

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

China Post (Hong Kong 2 of 5) On/Off

CPCENA1.
On

CPCENA0.
*** Off**

China Post (Hong Kong 2 of 5) Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 80.

CPCMIN.
Minimum Message Length

CPCMAX.
Maximum Message Length

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Korea Post

<Default All Korea Post Settings>

KPCDFT.

Korea Post

KPCENA1.
On

KPCENA0.
*** Off**

Korea Post Message Length

Scan the bar codes below to change the message length. Refer to Message Length Description (page 49) for additional information. Minimum and Maximum lengths = 2-80. Minimum Default = 4, Maximum Default = 48.

KPCMIN.
Minimum Message Length

KPCMAX.
Maximum Message Length

Korea Post Check Digit

This selection allows you to specify whether the check digit should be transmitted at the end of the scanned data. *Default = Don't Transmit*.

KPCCHK1.
Transmit Check Digit

KPCCHK0.
*** Don't Transmit Check Digit**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 7

Interface Keys

Keyboard Function Relationships

The following Keyboard Function Code, Hex/ASCII Value, and Full ASCII "CTRL"+ relationships apply to all terminals that can be used with the scanner. Refer to page 18 enable Control + ASCII mode.

Function Code	HEX/ASCII Value	Full ASCII "CTRL" +
NUL	00	@
SOH	01	A
STX	02	B
ETX	03	C
EOT	04	D
ENQ	05	E
ACK	06	F
BEL	07	G
BS	08	H
HT	09	I
LF	0A	J
VT	0B	K
FF	0C	L
CR	0D	M
SO	0E	N
SI	0F	O
DLE	10	P
DC1	11	Q
DC2	12	R
DC3	13	S
DC4	14	T
NAK	15	U
SYN	16	V
ETB	17	W
CAN	18	X
EM	19	Y
SUB	1A	Z
ESC	1B	[
FS	1C	\
GS	1D	]
RS	1E	^
US	1F	_

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

The last five characters in the Full ASCII “CTRL”+ column ([\ ] 6 -), apply to US only. The following chart indicates the equivalents of these five characters for different countries.

Country				Codes	
United States	[	\	]	6	-
Belgium	[	<	]	6	-
Scandinavia	8	<	9	6	-
France	^	8	$	6	=
Germany		A	+	6	-
Italy		\	+	6	-
Switzerland		<	..	6	-
United Kingdom	[	¢	]	6	-
Denmark	8	\	9	6	-
Norway	8	\	9	6	-
Spain	[	\	]	6	-

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Supported Interface Keys

ASCII	HEX	IBM PC/AT and Compatibles, USB PC Keyboard	Apple Mac/iMac Supported Keys
NUL	00	Reserved	Reserved
SOH	01	Enter (KP)	Enter/Numpad Enter
STX	02	Cap Lock	CAPS
ETX	03	ALT make	ALT make
EOT	04	ALT break	ALT break
ENQ	05	CTRL make	CNTRL make
ACK	06	CTRL break	CNTRL break
BEL	07	CR/Enter	RETURN
BS	08	Reserved	APPLE make
HT	09	Tab	TAB
LF	0A	Reserved	APPLE break
VT	0B	Tab	TAB
FF	0C	Delete	Del
CR	0D	CR/Enter	RETURN
SO	0E	Insert	Ins Help
SI	0F	Escape	ESC
DLE	10	F11	F11
DC1	11	Home	Home
DC2	12	Print	Prnt Scrn
DC3	13	Back Space	BACKSPACE
DC4	14	Back Tab	LSHIFT TAB
NAK	15	F12	F12
SYN	16	F1	F1
ETB	17	F2	F2
CAN	18	F3	F3
EM	19	F4	F4
SUB	1A	F5	F5
ESC	1B	F6	F6
FS	1C	F7	F7
GS	1D	F8	F8
RS	1E	F9	F9
US	1F	F10	F10
DEL	7F		BACKSPACE

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 8

Utilities

To Add a Test Code I.D. Prefix to All Symbologies

This selection allows you to turn on transmission of a Code I.D. before the decoded symbology. (See the Symbology Chart, beginning on page 112) for the single character code that identifies each symbology.) This action first clears all current prefixes, then programs a Code I.D. prefix for all symbologies. This is a temporary setting that will be removed when the unit is power cycled.

Add Code I.D. Prefix to All Symbologies (Temporary)

Show Decoder Revision

Scan the bar code below to output the decoder revision.

Show Decoder Revision

Show Scan Driver Revision

Scan the bar code below to output the scan driver revision. The scan driver controls image capture.

Show Scan Driver Revision

Show Software Revision

Scan the bar code below to output the current software revision, unit serial number, and other product information.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

REVINF.

Show Revision

Show Data Format

Scan the bar code below to show current data format settings.

DFMBK3?.

Data Format Settings

Test Menu

When you scan the Test Menu **On** code, then scan a programming code in this manual, the scanner displays the content of a programming code. The programming function will still occur, but in addition, the content of that programming code is output to the terminal.

Note: This feature should not be used during normal scanner operation.

TSTMNU1.

On

TSTMNU0.

*** Off**

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 9

Product Specifications

Unitech MS832 Scanner Product Specifications

Parameter	*Specification*
Mechanical	
Height	2.9 inches (75mm)
Length	6.7 inches (170mm)
Width	2.6 inches (66mm)
Weight	4.2 ounces (119g)
Electrical	
Input Voltage	4 to 5.5VDC
Operating Power	2W; 400 mA (typical) @ 5V
Standby Power	.45W; 90 mA (typical) @ 5V
Environmental	
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	-40°F to 140°F (-40°C to 60°C)
Humidity	0 to 95% non-condensing
Drop	Operational after 12 drops to concrete from 2 ft. (1m)
Environmental Sealing	IP40
Light Levels	0 - 100,000 lux (direct sunlight)
ESD	Up to 10kv direct air Up to 4kv indirect coupling plane
Motion Tolerance	100mm per second for 13 mil UPC
Scan Performance	
Pitch, Skew	60°, 70°
Symbol Contrast	35%
DOF with 5 mil, 1D bar code	
Typical Performance	
5 mil Code 39	33 - 95mm (1.3 - 3.7 in.)
13 mil UPC-A	32 - 255mm (1.3 - 10 in.)
20 mil Code 39	35 - 355mm (1.4 - 14 in.)
6.7 mil PDF417	30 - 95mm (1.2 - 3.7 in.)
10mil Data Matrix	30 - 100mm (1.2 - 3.9 in.)
15mil Data Matrix	21 - 162mm (0.8 - 6.4 in.)
20mil QR Code	23 - 200mm (0.9 - 7.9 in.)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Standard Cable Pinouts

Keyboard Wedge

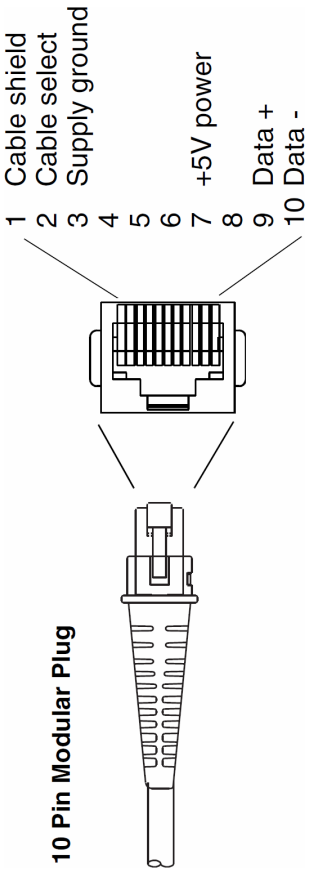
10 Pin RJ45 Modular Plug

Note: Pin assignments are not compatible withlegacy products.
Use of a cable with improper pin assignments may lead to damage to the unit.
Use of any cables not provided by the manufacturer may result in damage not covered by your warranty.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Standard Cable Pinouts

USB



Note: Pin assignments are not compatible with legacy products.
Use of a cable with improper pin assignments may lead to damage to the unit.
Use of any cables not provided by the manufacturer may result in damage not covered by your warranty.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 10

Maintenance

Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center (see Customer Support on page 110).

Maintenance

Your device provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable operation:

Cleaning the Device

Reading performance may degrade if the scanner's window is not clean. If the window is visibly dirty, or if the scanner isn't operating well, clean the window with a soft cloth or lens tissue dampened with water (or a mild detergent- water solution). If a detergent solution is used, rinse with a clean lens tissue dampened with water only.

The scanner and base's housing may also be cleaned the same way.

Caution:

Do not submerge the scanner in water. The scanner's housing is not watertight.

Do not use abrasive wipes or tissues on the scanner's window – abrasive wipes may scratch the window. Never use solvents (e.g., alcohol or acetone) on the housing or window – solvents may damage the finish or the window.

Inspecting Cords and Connectors

Inspect the interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. Contact your distributor for information about cable replacement. Cable replacement instructions are on page 107.

Replacing Cables

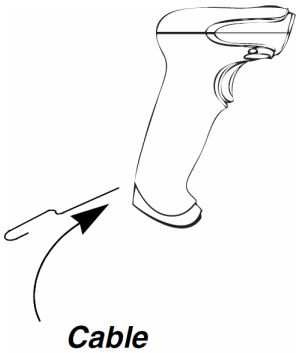
The standard interface cable is attached to the scanner with an 10-pin modular connector. When properly seated, the connector is held in the scanner's handle by a flexible retention tab. The interface cable is designed to be field replaceable.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

- Order replacement cables from unitech or from an authorized distributor.
- When ordering a replacement cable, specify the cable part number of the original interface cable.

Replacing an Interface Cable

1. Turn the power to the host system OFF.
2. Disconnect the scanner's cable from the terminal or computer.
3. Locate the small hole on the back of the scanner's handle. This is the cable release.
4. Straighten one end of a paper clip.
5. Insert the end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out while maintaining pressure on the paper clip, then remove the paper clip.



Cable Release

6. Replace with the new cable.
   Insert the connector into the opening and press firmly. The connector is keyed to go in only one way, and will click into place.

Troubleshooting a Unitech MS832 Scanner

The scanner automatically performs self-tests whenever you turn it on. If your scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

Is the power on? Is the aimer on?

If the aimer isn't illuminated, check that:

- The cable is connected properly.
- The host system power is on (if external power isn't used).
- The button works.

Is the scanner having trouble reading your symbols?

If the scanner isn't reading symbols well, check that the scanner window is clean and that the symbols:

- Aren't smeared, rough, scratched, or exhibiting voids.
- Aren't coated with frost or water droplets on the surface.
- Are enabled in the scanner or in the decoder to which the scanner connects.

Is the bar code displayed but not entered?

The bar code is displayed on the host device correctly, but you still have to press a key to enter it (the Enter/Return key or the Tab key, for example).

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

- You need to program a suffix. Programming a suffix enables the scanner to output the bar code data plus the key you need (such as “CR”) to enter the data into your application. Refer to Prefix/Suffix Overview beginning on page 34 for further information.

Does the scanner read the bar code incorrectly?

If the scanner reads a bar code, but the data is not displayed correctly on the host screen:

- The scanner may not be programmed for the appropriate terminal interface. For example, you scan “12345” and the host displays “@es%.”

Reprogram the scanner with the correct Plug and Play bar code. See Programming the Interface beginning on page 6.

- The scanner may not be programmed to output your bar code data properly. For example, you scan “12345” and the host displays “A12345B.”

Reprogram the scanner with the proper symbology selections. See Chapter 6.

The scanner won’t read your bar code at all.

1. Scan the sample bar codes in the back of this manual. If the scanner reads the sample bar codes, check that your bar code is readable.
   Verify that your bar code symbology is enabled (see Chapter 6).

If the scanner still can’t read the sample bar codes, scan All Symbologies (page 49).
If you aren’t sure what programming options have been set in the scanner, or if you want the factory default settings restored, refer to Resetting the Factory Defaults on page 5.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter 11

Customer Support

Technical Assistance

Contact information for technical support, product service, and repair can be found at www.ute.com.

Limited Warranty

unitech warrants its products to be free from defects in materials and workmanship and to conform to unitech's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any unitech product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than unitech or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by unitech for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to unitech factory or authorized service center for inspection. No product will be accepted by unitech without a Return Materials Authorization, which may be obtained by contacting unitech. In the event that the product is returned to unitech or its authorized service center within the Warranty Period and unitech determines to its satisfaction that the product is defective due to defects in materials or workmanship,unitech, at its sole option, will either repair or replace the product without charge, except for return shipping to unitech.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT.

UNITECH'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL unitech BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF unitech ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO unitech FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN unitech MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. unitech extends these warranties only to the first end-users of the products. These warranties are non-transferable. The duration of the limited warranty for the Unitech MS832 scanner is ninety (90)days.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Chapter A

Reference Charts

Symbology Chart

Symbology	AIM ID	Possible AIM ID Modifiers (m)	Code ID (hex)
All Symbologies			(0x99)
Australian Post	]X0		A (0x41)
Aztec Code	]zm	0-9, A-C	z (0x7A)
Batch Mode Quantity			5 (0x35)
British Post	]X0		B (0x42)
Canadian Post	]X0		C (0x43)
China Post	]X0		Q (0x51)
Chinese Sensible Code (Han Xin Code)	]X0		H (0x48)
Codabar	]Fm	0-1	a (0x61)
Codablock A	]O6	0, 1, 4, 5, 6	V (0x56)
Codablock F	]Om	0, 1, 4, 5, 6	q (0x71)
Code 11	]H3		h (0x68)
Code 128	]Cm	0, 1, 2, 4	j (0x6A)
GS1-128	]C1		I (0x49)
Code 32 Pharmaceutical (PARAF)	]X0		< (0x3C)
Code 39 (supports Full ASCII mode)	]Am	0, 1, 3, 4, 5, 7	b (0x62)
Code 49	]Tm	0, 1, 2, 4	l (0x6C)
Code 93 and 93i	]Gm	0-9, A-Z, a-m	i (0x69)
Data Matrix	]dm	0-6	w (0x77)
EAN-13 (including Bookland EAN)	]E0		d (0x64)
EAN-13 with Add-On	]E3		d (0x64)
EAN-13 with Extended Coupon Code	]E3		d (0x64)
EAN-8	]E4		D (0x44)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Symbology	AIM ID	Possible AIM ID Modifiers (m)	Code ID (hex)
EAN-8 with Add-On	]E3		D (0x44)
GS1 Composite	]em	0-3	y (0x79)
GS1 DataBar	]em	0	y (0x79)
GS1 DataBar Limited	]em		{ (0x7B)
GS1 DataBar Omnidirectional	]em		y (0x79)
GS1 DataBar Expanded	]em		} (0x7D)
InfoMail	]X0		, (0x2c)
Intelligent Mail Bar Code	]X0		M (0x4D)
Interleaved 2 of 5	]Im	0, 1, 3	e (0x65)
Japanese Post	]X0		J (0x4A)
KIX (Netherlands) Post	]X0		K (0x4B)
Korea Post	]X0		? (0x3F)
Matrix 2 of 5	]X0		m (0x6D)
MaxiCode	]Um 0-3		x (0x7 8)
MicroPDF417	]Lm 3-5		R (0x52)
MSI	]Mm 0		g (0x67)
NEC 2 of 5	]X0		Y (0x59)
OCR MICR (E 13 B)	]o3		O (0x4F)
OCR SEMI Font	]o3		O (0x4F)
OCR-A	]o1		O (0x4F)
OCR-B	]o2		O (0x4F)
PDF417	]Lm 0-2		r (0x72)
Planet Code	]X0		L (0x4C)
Postal-4i	]X0		N (0x4E)
Postnet	]X0		P (0x50)
QR Code and Micro QR Code	]Qm	0-6	s (0x73)
Straight 2 of 5 IATA	]Rm	0, 1, 3	f (0x66)
Straight 2 of 5 Industrial	]S0		f (0x66)

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Symbology	AIM ID	Possible AIM ID Modifiers (m)	Code ID (hex)
TCIF Linked Code 39 (TLC39)	]L2		T (0x54)
Telepen	]Bm		t (0x54)
UPC-A	]E0		c (0x63)
UPC-A with Add-On	]E3		c (0x63)
UPC-A with Extended Coupon Code	]E3		c (0x63)
UPC-E	]E0		E (0x45)
UPC-E with Add-On	]E3		E (0x45)
UPC-E1	]X0		E (0x45)

Note: "m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.

Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

Refer to Data Editing beginning on page 34 and Data Formatting beginning on page 40 for information about using Code ID and AIM ID.

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

ASCII Conversion Chart (Code Page 1252)

Note: This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings.

Non-Printable Characters					
DEC	**HEX**	**Character (Code)**	**DEC**	**HEX**	**Character (Code)**
0	0	NULL	16	10	DATA LINK ESCAPE (DLE)
1	1	START OF HEADING(SOH)	17	11	DEVICE CONTROL1 (DC1)
2	2	START OF TEXT (STX)	18	1	2 DEVICE CONTROL 2 (DC2)
3	3	END OF TEXT (ETX)	19	13	DEVICE CONTROL 3 (DC3)
4	4	END OF TRANSMISSION (EOT)	20	14	DEVICE CONTROL 4 (DC4)
5	5	END OF QUERY (ENQ)	21	15	NEGATIVE ACKNOWLEDGEMENT(NAK)
6	6	ACKNOWLEDGE (ACK)	22	16	SYNCHRONIZE (SYN)
7	7	BEEP (BEL)	23	17	END OF TRANSMISSIONBLOCK (ETB)
8	8	BACKSPACE (BS)	24	18	CANCEL (CAN)
9	9	HORIZONTAL TAB (HT)	25	19	END OF MEDIUM (EM)
10	A	LINE FEED (LF)	26	1A	SUBSTITUTE (SUB)
11	B	VERTICAL TAB (VT)	27	1B	ESCAPE (ESC)
12	C	FF (FORM FEED)	28	1C	FILE SEPARATOR (FS)RIGHT ARROW
13	D	CR (CARRIAGE RETURN)	29	1D	GROUP SEPARATOR (GS)LEFT ARROW
14	E	SO (SHIFT OUT)	30	1E	RECORD SEPARATOR (RS)UP ARROW
15	F	SI (SHIFT IN)	31	1F	UNIT SEPARATOR (US)DOWN ARROW

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	6	6 f
39	27	'	71	47	G	103	67	g

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C	|
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	<DEL>

Extended ASCII Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
128	80	€	171	AB	«	214	D6	Ö
129	81		172	AC	¬	215	D7	×
130	82	‚	173	AD		216	D8	Ø
131	83	ƒ	174	AE	®	217	D9	Ù
132	84	„	175	AF	¯	218	DA	Ú
133	85	…	176	B0	°	219	DB	Û
134	86	†	177	B1	±	220	DC	Ü
135	87	‡	178	B2	²	221	DD	Ý
136	88	ˆ	179	B3	³	222	DE	Þ
137	89	‰	180	B4	’	223	DF	ß
138	8A	Š	181	B5	µ	224	E0	à
139	8B	‹	182	B6	¶	225	E1	á

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Extended ASCII Characters (Continued)								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
140	8C	OE	183	B7	·	226	E2	â
141	8D		184	B8	¸	227	E3	ã
142	8E	Ž	185	B9	¹	228	E4	ä
143	8F		186	BA	º	229	E5	å
144	90		187	BB	»	230	E6	æ
145	91	‘	188	BC	¼	231	E7	ç
146	92	’	189	BD	½	232	E8	è
147	93	“	190	BE	¾	233	E9	é
148	94	”	191	BF	¿	234	EA	ê
149	95	•	192	C0	À	235	EB	ë
150	96	–	193	C1	Á	236	EC	ì
151	97	—	194	C2	Â	237	ED	í
152	98	˜	195	C3	Ã	238	EE	î
153	99	™	196	C4	Ä	239	EF	ï
154	9A	š	197	C5	Å	240	F0	ð
155	9B	›	198	C6	Æ	241	F1	ñ
156	9C	oe	199	C7	Ç	242	F2	ò
157	9D		200	C8	È	243	F3	ó
158	9E	ž	201	C9	É	244	F4	ô
159	9F	Ÿ	202	CA	Ê	245	F5	õ
160	A0		203	CB	Ë	246	F6	ö
161	A1	¡	204	CC	Ì	247	F7	÷
162	A2	¢	205	CD	Í	248	F8	ø
163	A3	£	206	CE	Î	249	F9	ù
164	A4	¤	207	CF	Ï	250	FA	ú
165	A5	¥	208	D0	Ð	251	FB	û
166	A6	¦	209	D1	Ñ	252	FC	ü
167	A7	§	210	D2	Ò	253	FD	ý
168	A8	¨	211	D3	Ó	254	FE	þ
169	A9	©	212	D4	Ô	255	FF	ÿ
170	AA	ª	213	D5	Õ			

Code Page Mapping of Printed Bar Codes

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the

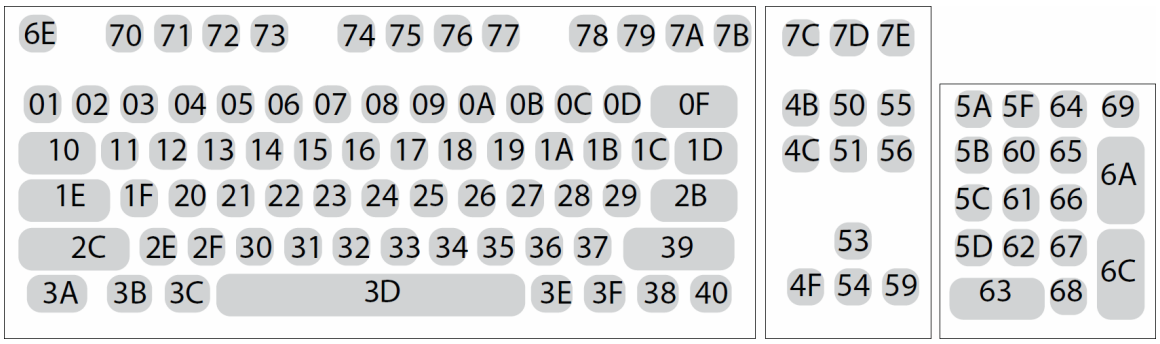
Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

case, select the code page with which the bar codes were created. The data characters should then appear properly.

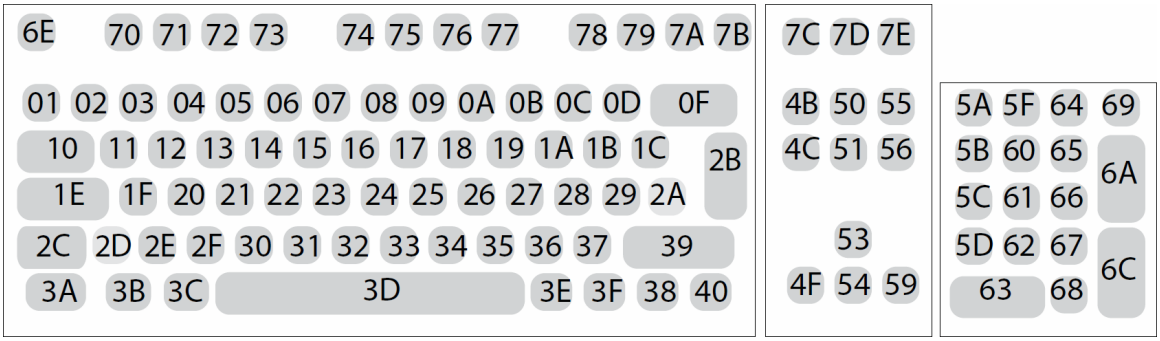
Code Page	Standard	Description
1	CP ISO646	
2 (Default)	ISO 2022	Automatic National Replacement Characters
3	CP Binary	
51	ISO 8859 1 51	Western European Replacement Characters
82	ISO 2022 11 Swe	Swedish Replacement Characters
83	ISO 2022 69 Fre	French/Belgium Replacement Characters
81	ISO 2022 25 Fra	French/Belgium Replacement Characters
84	ISO 2022 11 Ger	German Replacement Characters
85	ISO 2022 11 Ita	Italian Replacement Characters
86	ISO 2022 11 Swi	Swiss Replacement Characters
87	ISO 2022 11 UK	British Replacement Characters
88	ISO 2022 11 Dan	Danish Replacement Characters
89	ISO 2022 11 Nor	Norwegian Replacement Characters
90	ISO 2022 11 Spa	Spanish Replacement Characters
91	ISO 2022 85	Spanish Replacement Characters
92	ISO 2022 16	Portuguese Replacement Characters
93	ISO 2022 84	Portuguese Replacement Characters
94	ISO 2022 60	Norwegian Replacement Characters

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Unicode Key Maps



104 Key U.S. Style Keyboard



105 Key European Style Keyboard

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Sample Symbols

UPC-A

0 123456 7890

Code 128

Code 128

Code 39

BC321

Code 93

123456-9$

Interleaved 2 of 5

1234567890

EAN-13

9 780330 290951

Codabar

A13579B

Straight 2 of 5 Industrial

123456

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Sample Symbols

Matrix 2 of 5

6543210

GS1 DataBar

(01)00123456789012

PDF417

Car Registration

Data Matrix

Test Symbol

QR Code

Numbers

4-CB (4-State Customer Bar Code)

01,234,567094,987654321,01234567891

ID-tag (UPU 4-State)

J18CUSA8E6N062315014880T

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Sample Symbols

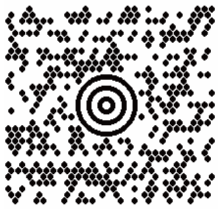
Aztec

Package Label

Micro PDF417

Test Message

MaxiCode



Test Message

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Programming Chart

0

1

2

3

4

5

6

7

8

9

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Programming Chart

A

B

C

D

E

F

Save

Discard

Reset

Note: If you make an error while scanning the letters or digits (before scanning Save), scan Discard, scan the correct letters or digits, and **Save** *again.*

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.

Appendix

Worldwide Support

Unitech's professional support team is available to quickly answer questions or technical-related issues. Should an equipment problem occur, please contact the nearest Unitech regional service representative. For complete contact information please visit the Web sites listed below:

Region	Web Site
Global Operation Center	http://www.ute.com
Unitech Taiwan	http://tw.ute.com
Unitech Asia Pacific & Middle East	http://apac.ute.com http://india.ute.com
Greater China Division	http://cn.ute.com
Unitech Japan	http://jp.ute.com
Unitech North America	http://us.ute.com ; http://can.ute.com
Unitech Latin America	http://latin.ute.com
Unitech Europe	http://eu.ute.com

Copyright 2014 unitech Electronics Co., Ltd. All rights reserved. Unitech is a registered trademark of unitech Electronics Co., Ltd.